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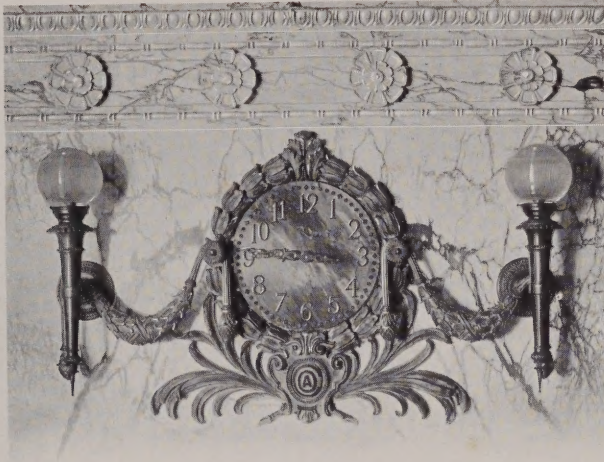
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FOR REFERENCE
Do Not Take From This Room

DEMCO



AMERICAN OPTICAL COMPANY

SPECTACLES EYEGLASSES LENSES

FRAMES, MOUNTINGS, MATERIAL
AMOPTISCOPES
AUTOMOBILE GOGGLES
TRIAL SETS, TRIAL FRAMES
EYEGLASS CHAINS
AUTOMATIC EYEGLASS HOLDERS
SPECTACLE, EYEGLASS AND GOGGLE CASES
OPTICAL MACHINERY, TOOLS
SUPPLIES, ETC.

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SOUTHBRIDGE, MASSACHUSETTS



Geo. W. Wells

AMERICAN OPTICAL COMPANY

ESTABLISHED - - - 1833
INCORPORATED - - - 1869



GEORGE W. WELLS - - President
CHANNING M. WELLS Vice-President
ALBERT B. WELLS - - Treasurer
J. CHENEY WELLS - - Secretary

SOUTHBRIDGE MASSACHUSETTS U S A

NEW YORK CHICAGO SAN FRANCISCO

No 39 HATTON GARDEN LONDON E C ENGLAND

CABLE ADDRESS AMOPTICO



CHANNING M. WELLS, *Vice-President*



ALBERT B. WELLS, *Treasurer*



J. CHENEY WELLS, *Secretary*



INTRODUCTION

THE first AOC Co general catalogue was published in 1894. In the interim, the business of the American Optical Company has attained proportions which could not be foreseen at that time. Growth and development have been so rapid that, while fully realizing the importance of issuing a complete catalogue which should be a reference work as well, it has not been found possible until the present time to properly compile such a work.

Thirty years ago, the amount of detail had reached a point where the need of system and generally accepted standards forcibly presented itself. Without a serious effort at standardization, development in the manufacture of optical goods would have been retarded, the rapid addition of new lines resulting in hopeless confusion. The problem was then seriously taken in hand in connection with the AOC Co products and it has been the subject of constant study and effort ever since.

AOC Co systems and nomenclature have been accepted the world over, and acknowledgment is due here of our appreciation of the generous support accorded our efforts at systematizing and standardizing the ever increasing detail of optical products. But for this foundation, based on the work of more than thirty years, a reference work of any value would have been out of the question.

The business of the American Optical Company is built upon the integrity of its products. During a manufacturing experience of more than three-quarters of a century, close adherence to a definitely settled policy to produce nothing unworthy of bearing the AOC Co trade mark, has been responsible for the growth the company has attained and the world-wide endorsement its products have received. Our purpose is not alone to maintain the same high standard of quality and service, but to raise it whenever that is found possible.

AMERICAN OPTICAL COMPANY

HISTORICAL—1833-1912

IT is impossible to detail the existence of the American Optical Company without, in a large measure, writing the history of the American optical industry as a whole. for the latter had its inception in the town of Southbridge. During the past eighty years, scores of firms devoted to the manufacture of optical wares have come and gone—some of them right here in Southbridge. Even their names are forgotten in a majority of instances.

To William Beecher belongs the distinction of having inaugurated what has since grown to be an industry of far-reaching importance. Optical wares were made at an earlier date in other places, but their manufacture was not continued steadily or developed to any great degree. Beecher was the son of a Connecticut farmer and first came to Southbridge in 1826 to establish himself as a jeweler, having previously served an apprenticeship in that business in Providence. Seven years later he undertook the manufacture of spectacles as a means of expanding his business. This was in 1833 and an upstairs room of the store served as a shop where Beecher and his three apprentices began the making of spectacles. One of these apprentices was Robert H. Cole.



Original Factory of American Optical Company
Occupied until 1872

Silver spectacles were the first articles made, and instead of following the crude and

laborious hand methods then in vogue, Beecher, who was a skilful mechanic of rare genius, invented many tools and devices for spectacle manufacture which materially lessened the cost of production. Though only undertaken as a side issue at first, the business soon grew to such an extent that new quarters were occupied in 1839. This building still stands and was employed for the manufacture of optical goods up to comparatively recent times.

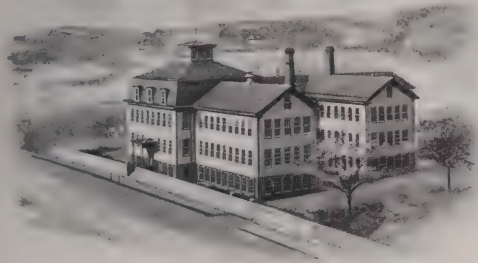
It was undoubtedly due to Beecher's enterprise and genius that Southbridge became the center of the American optical industry, as the numerous apprentices who acquired their knowledge of the business from him were largely responsible for its subsequent growth.

From the small beginning in silver spectacles, the output was extended to embrace everything then in demand, most of such products having been imported up to that time. It was generally thought that many of them could not be manufactured here, and a typical instance of the manner in which Beecher set about to alter this condition is illustrated by his undertaking the manufacture of steel spectacles. An imported sample pair cost him \$3, but as the result of experimenting with them, he soon succeeded in adding steel spectacles to his line; these undoubtedly were the first to be made in this country.

Mr. Beecher continued to manufacture optical goods until 1840, when he transferred his entire interest to the firm of Ammidown & Putney. In 1851 he again acquired an

interest in the business, the firm then being known as Ammidown & Company and consisting of L. H. Ammidown, Robert H. Cole and William Beecher.

A brief resumé of the changes in interest that took place between the inception of the business in 1833, and its incorporation as the American Optical Company in 1869 will make clear how largely its success has been dependent upon the efforts of a comparatively small number of men.



First Factory erected on present site of Main Works, 1872

1833-1840 William Beecher.

1840-1842 Ammidown & Putney (L. H. Ammidown and Jairus Putney).

1842-1849 Ammidown & Son (L. H. Ammidown and Holdridge Ammidown).

1850-1851 Ammidown & Company (L. H. Ammidown and Robert H. Cole).

1851-1854 Ammidown & Company (L. H. Ammidown, Robert H. Cole and William Beecher).

1854-1859 Ammidown & Company (Holdridge Ammidown, Robert H. Cole and William Beecher).

1860-1862 Beecher & Cole (William Beecher, Robert H. Cole and E. Merritt Cole).

1862-1866 Robert H. Cole & Company (Robert H. Cole and E. Merritt Cole).

1866-1869 Robert H. Cole & Company (Robert H. Cole, E. Merritt Cole and A. M. Cheney).

1869- American Optical Company (Robert H. Cole, President; George W. Wells, Clerk; E. Merritt Cole, Treasurer).

The following list of goods manufactured in 1850 will give some idea of the range of the business at that time:

Gold, coin silver and steel spectacles.
Steel spring eyeglasses.
Quizzing glasses, plated and wire goggles.
Eye protectors.
Split glass spectacles (made to order).

Gold work was first undertaken under L. H. Ammidown in 1848. The gold wire was difficult to obtain and more so to work. No dies were used for cutting, all work being filed. The materials employed for both gold and silver wares were mostly coin, California

\$50 gold pieces, French crowns and Portuguese dollars being noted in early records.

Mention is first made of a patent under date of October 31, 1850. This was for a temple and was granted to John P. Paine. Royalties of five cents for each pair of silver spectacles and twenty cents for each gold pair were paid. Most of the goods were marketed through wholesalers in New York and Boston, though large quantities were disposed of by salesmen who bought and sold goods on their own responsibility; in other words, small itinerant merchants.



Extension of factory buildings, completed 1883



MAIN FACTORIES

Spectacle and Eyeglass Frames, Mountings, Material, Cases and Accessories, Trial Sets, Trial Frames and Accessories, Optical Machinery and Tools, Etc.
 Floor space 346,000 square feet. Over 1,500 employees

The yearly sales between 1850 and 1869 show an increase from \$12,750 in 1850 to \$50,400 in 1868, there naturally being a dull period during the Civil War. The capital invested in 1843 was \$4488.40. In 1851 it was \$6000 and in 1860, \$8250. The average number of employees between 1848 and 1866 was thirteen.

Up to the summer of 1853 a water wheel had been employed for running the machinery. One-man power in the shape of a burly negro taking its place when Cohasse brook was low. By that time, business had increased to such an extent that a small oscillating cylinder steam engine was installed, this constituting quite an event.

By referring to the summary given, it will be seen that William Beecher and Robert H. Cole were most prominently identified with the business and were associated with it for the longest period during its early history. On April 2, 1864, George W. Wells entered the employ of Robert H. Cole & Company. He was eighteen at the time and was one of the first to undertake the making of spectacles without having previously served an apprenticeship of three years or more. The subsequent history of the American Optical Company reveals how important a part he played in its development and expansion during the nearly fifty years he has been identified with it.

Lack of business brought about a change of employment for a few months, Mr. Wells entering a machine shop, but at the request of Mr. Cole, he returned April 1, 1865, and was taught the trade of steel spectacle making. At the end of a month he had mastered this work, making the complete spectacles, which included the setting of the lenses. They were termed "Fine Steel Ladies" and were the best quality of their kind then made. Mr. Wells was paid \$5.76 per dozen for turning them out. To-day a better quality frame sells for \$1.50 a dozen.

In September, 1865, due to a misunderstanding, Mr. Wells left and entered the employ of E. Edmonds & Son on piece work, making an average of \$75 a month, but at the earnest solicitation of his cousin, Alpha M. Cheney, on behalf of Mr. Cole, he again returned to the old firm, his wages being fixed at \$3 per day of ten hours, an unusual reward at that time for a boy of nineteen. Mr. Wells' great value to the concern lay in his ability to systematize and reduce the cost of production. His efforts were accordingly directed to developing machinery and special tools for that purpose. About this time, he applied the principle





NEW LENSDALE FACTORIES

Spectacle and Eyeglass Lenses in all stages after grinding and polishing ; trial set lenses ; lens stock. Floor space 169,500 square feet. Over 600 employees

THE POWER PLANT IS EQUIPPED WITH

Diesel and Steam Engines, Turbines, Etc., 2900 horse-power

Low pressure steam for heating, 2100 boiler horse-power. High pressure steam, 300 boiler horse-power



LENSDALE FACTORIES

Lens Moulding, Blocking, Grinding and Polishing. Physical and Chemical Research Laboratories. Storage of raw materials, glass, emery, pitch, polishing compounds, etc. Floor space 222,700 square feet. Over 400 employees

Office of Vice-President
and Secretary

of eccentric rolls to the tapering of stock for temples, and built the first lens cutting machine, after designs by E. M. Cole. In slightly modified form this machine is employed the world over by manufacturers and opticians.

Notable among the important inventions of George W. Wells were, the original machine for peening on end pieces, the first automatic machine for drilling and tapping end pieces and the first machine

for jumping and forming spectacle bridges. These and many other devices for improving and increasing the production of spectacles gave a great impetus to the successful growth of this industry.

With the exception of a period of six months, which Mr. Wells spent in a trip to California, he remained in the employ of Robert H. Cole & Company steadily until 1869. In January of that year he decided to start in the optical business with his brother, Hiram C. Wells. Places in New York and New Jersey were inspected as sites for a factory, the question being finally settled by purchasing a controlling interest in the H. C. Ammidown Company's plant in Southbridge.



Entrance to Administration Building



Main Stairway

Overtures were then made to Mr. Wells by Robert H. Cole to become a member of the firm of Robert H. Cole & Company. This was accepted upon condition that Hiram C. Wells be admitted to the partnership at the same time.



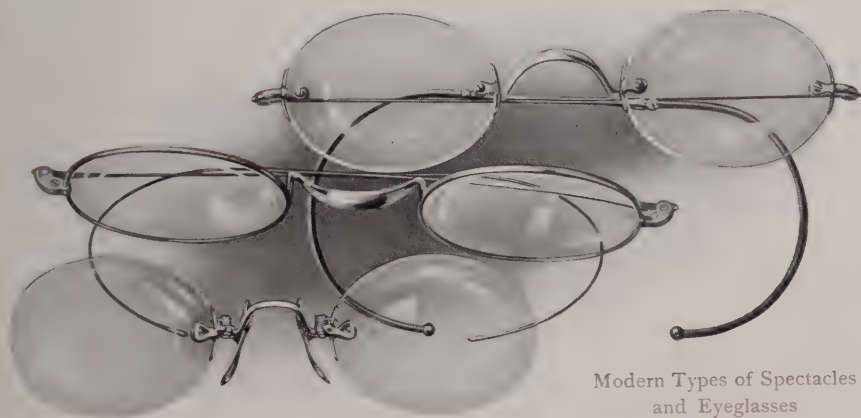
Early Types of Spectacles and Eyeglasses, prior to 1869.

Further negotiations led to the consolidation of the interests of H. C. Ammidown & Company and Robert H. Cole & Company in the American Optical Company. At the time of the incorporation Mr. Wells was not quite twenty-three. This was in the early part of 1869. There were at this time thirty-five people in the employ of Robert H. Cole & Company.

Briefly stated, the foregoing summarizes the events of a business history of thirty-six years that directly led up to the incorporation of the American Optical Company.

From that day to this the business has grown steadily, forging ahead as rapidly as was consistent with the establishment of a solid foundation for each new era of expansion. A total annual output of a little over fifty thousand dollars has been increased to an extent where the cost of the precious metals used as raw material alone is considerably in excess of a million dollars a year. From a staff of thirty-five, the working force has grown to more than twenty-five hundred.

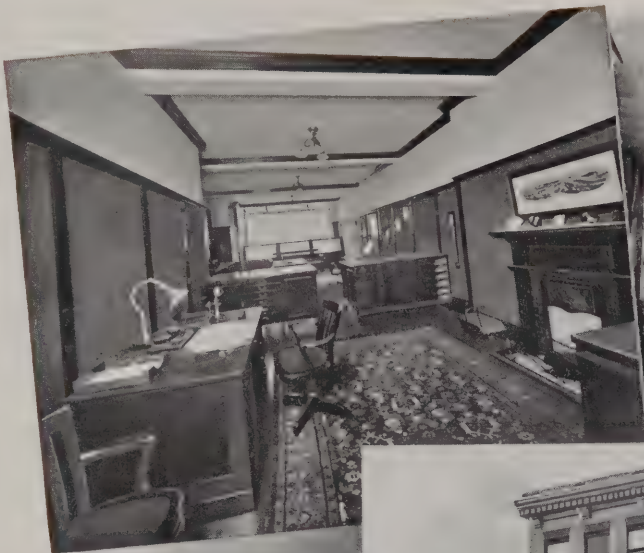
Developments in factory buildings have been kept in advance of the requirements of the business during the past decade. Wooden structures have been replaced by modern brick buildings, and later construction is of reinforced concrete, the new Lensdale plant recently completed being representative of the highest type of this class of building.



Modern Types of Spectacles and Eyeglasses

As this is written there are some thirty-six structures laid out as three separate groups generally known as the Main, Lensdale and New Lensdale Works.

These buildings, which are shown on the foregoing pages, cover six acres of land in an estate embracing



European Branch of American Optical Company
No. 39 Hatton Garden, London, E. C., England



Office of President and Treasurer

nearly fifty acres and providing a total floor space of over seventeen acres.

In a perfectly appointed power station are centralized the control and distribution of thirty-five hundred horse-power in electricity, steam and hydraulic turbines supplying the necessary motive force, heat and light for the entire works.

Of the factors that have contributed to the upbuilding of this great enterprise, without question, the most important has been the integrity of its founders. The same painstaking care that William Beecher devoted to the making of those first silver spectacle frames in 1833 has been given to the manufacture of the product turned out ever since. The steadfast adherence to an ideal has been chiefly responsible for giving all goods bearing the AOC_o trade marks the sterling character they now bear throughout the world.



Reception Room



Directors' Room



View from roof of Main Factories, Library and Purchasing Department



Order and Billing Departments

SUGGESTIONS FOR ORDERING

While the following remarks are addressed to our customers, it is hoped that they may also be read by oculists and optometrists and that they will be guided by the suggestions made in placing orders with wholesalers. This will insure prompt and efficient service, enabling wholesalers to fill orders without guessing, which should never be expected in a business of such detail.

Our Order Department has positive instructions not to guess at anything. Orders are taken literally and we believe that it is less annoying to customers to reply to an occasional order inquiry than to receive goods of construction other than desired, occasioned by a misinterpretation of their wants.

Information relative to ordering Lenses will be found in the Lens Section of this catalogue.

Order Books We urge that customers always use our Order Books, a system originated by us which has proven beneficial to both wholesaler and manufacturer. This is important, as the rules governing the conduct of our Order Department require that all orders not written upon our blanks be copied, thus causing delay in entering. These Order Books are furnished free of charge and they enable customers to retain carbon copies of all orders for reference.

Order Number In referring to orders, always mention the factory order number given upon our acknowledgment postal, which number should be entered upon order copy.

General Suggestions Write all orders in dozens or fractions thereof. Avoid the use of ditto marks and questionable abbreviations.

Always give size of eye, karat of gold, quality of gold-filled and color of steel goods desired. In writing orders it is desirable that customers employ only such terms and expressions as are used in this catalogue or in our price list. The use of a variety of terms and expressions, all intended to be identical in meaning, is very confusing and leads to delays and errors which would be avoidable by adhering to those adopted by us.

Be explicit when ordering goods other than regular, and if you think there will be any possibility of doubt as to what is required, send a sample or request us to submit a sample before proceeding with the order.



Other Correspondence Do not write anything on the order sheet that does not pertain to that particular order; any correspondence or reference foreign to the order will necessarily delay the entering of it.

Samples If it is necessary to send samples, they should be marked plainly with the customer's name and order number on a tag securely fastened to the same. This is imperative.

If sample is forwarded, the order should plainly state for what purpose it is sent — that is, whether the goods are to be “exactly like sample” in every detail, or only like some special detail of sample, which should be clearly expressed.

Catalogue Number Always give our catalogue number; it is not necessary to specify details of construction which are carried by the number as described in the catalogue.

Advance Orders As orders are executed in rotation as received, it is advisable to anticipate requirements at all times. This may be facilitated by the keeping of records of the previous year's purchases, and by their aid orders may be placed intelligently a full year in advance.

Reserve Orders Under certain limitations and restrictions we accept reserve orders from our customers; that is, goods are made up in accordance with orders, but held in stock by us, subject to call, with the understanding that any part remaining in our possession will be shipped to the customer at the expiration of twelve months from date of original reserve order. Further explanation will be furnished upon request.

Periodical Shipments It has been found desirable by some of our customers to place advance orders to be shipped at regular intervals. By the aid of records of the sales of previous years, such orders may be placed intelligently, to be shipped once a month, twice a month, or weekly, as desired. When shipping date given is the first day of the month, we accept the same with the understanding that it will be as near that time as the volume of business will admit.

All orders placed for future delivery or for *reserve* will be accepted subject to the conditions governing prices, etc., which may be in effect at the time the goods are shipped.

Orders in process of manufacture cannot be countermanded except with our consent.

Order Inquiries are made on a special form. The reply should be written directly underneath our question and original sheet returned promptly. This is very important as the reply becomes a part of the original order completing our records. Further procedure on orders thus questioned depends almost entirely upon the promptness with which replies are returned.

Stamping Unless otherwise instructed all frames and mountings will be stamped with our registered trade marks and quality marks as explained on page 27.

Bridge Assortments The AOCo assortments of bridges (see pages 37 and 38) are always furnished unless otherwise specified. Bridges ordered to dimensions not in AOCo bridge systems are frequently subject to extra charges and always cause delays which may be avoided by ordering regular goods.

Riding, Half-riding and Cable Temple Frames are regularly furnished with "SS" Bridges.

Straight Temple Frames are regularly furnished with "C" Bridges unless otherwise ordered, except on "Patented Styles" in gold-filled and Alumnico, on which "SS" Bridges are supplied.

Reversible Temple Frames are regularly furnished with round wire hoop bridges unless otherwise ordered.

Regular Temple Lengths (See Material Section.)

Eyewire All Spectacle and Eyeglass Frames are regularly made with oval eyewire unless otherwise described and illustrated.

Angular End Pieces and Angular Shanks on Bridges will be furnished on any spectacle frames or mountings when so ordered. As regularly made, this construction tilts the lenses forward 12 degrees from vertical.

Children's Frames Riding Frames ordered "for children" or any riding frames ordered in 2-eye or 3-eye sizes are regularly furnished with AOCo Assortment of "SS" Bridges for Children and 140 mm. temples. Straight temple frames ordered in these sizes are regularly furnished with AOCo Assortment of "C" Bridges for Children and 133 mm. temples. (See page 37.)

Springs For shapes and lengths of Eyeglass Springs, see Material Section.

Studs "B" Studs are regularly furnished on eyeglass frames and mountings. Angular Studs are regularly made 12 degrees from vertical. (See Material Section.)

Guards Eyeglass frames and mountings are made with cork guards unless otherwise ordered or otherwise described and listed in this catalogue. Offset cork guards are made with riveted arm unless ordered in "one-piece" construction. Offset zylonite guards are made in "one piece" in all regular angles, except those styles otherwise described and listed. Wells offset guards are regularly furnished in C 1 angle. Other angles and styles shown in Material Section are carried in stock.



Central Station Pneumatic Tube System



Main Offices

Handles are furnished on eyeglass frames and grab fronts, as illustrated and described herein. Unless specially ordered eyeglass mountings are furnished without handles. Handle rings are regularly made size "D" for frames and size "B" for mountings. (See Material Section.)

Catch and Pin are supplied on eyeglass frames only when so ordered.

Finger-piece Eyeglasses A special section of this catalogue is devoted to finger-piece eyeglass frames, mountings and fitting sets in all metals.

Repairs Any AOCo goods found to be defective will be repaired free of charge if the defects are due to faulty workmanship or imperfect materials. All other repairs to AOCo goods will be charged for. We accept no risk in repairing goods not manufactured by this Company.

Do not cut or mutilate this catalogue. When orders are placed direct with us by the wholesaler, or with the wholesaler by the optician, the catalogue number of the article, together with the necessary detail, if any, is all the information required.

Throughout this catalogue, both frames and mountings are illustrated fitted with lenses, merely for the purpose of conveying a better idea of the completed article.

Lenses are fitted in frames or mountings only when specified or when so ordered, except in goggles which are regularly supplied with lenses.

Prices and other information with reference to American Optical Company's goods will be furnished by the wholesale trade upon application.

SHIPMENTS

Our Responsibility All goods are sold F. O. B. Southbridge, our responsibility ceasing upon delivery to the transportation company in good condition.

Express or Freight We ship all goods, except heavy machinery, by express unless otherwise instructed; when freight shipment is desired the order should so stipulate.

Liability of Express Companies On express shipments the carrying companies limit their liability to the sum of \$50.00 upon each package. When so instructed we declare the full valuation, in which case the shipment is subject to an advanced rate and the express company assumes full responsibility.

Goods by Mail It is our custom to insure all mail packages valued from \$1.00 to \$7.50, by which we accept responsibility for their safe delivery. A small premium is charged on each package for such insurance. Mail packages valued over \$7.50 are sent by registered mail at the risk of the consignee. Mail packages for foreign customers are sent by Parcels Post at the risk of the consignee.

Partial Shipments Unless otherwise ordered we forward goods to customers as soon as they accumulate in sufficient quantity, in our judgment, to warrant a shipment. When necessary that an entire order go forward in one shipment, the instructions should be given to "ship complete". Such instructions may, however, cause the delay of a large shipment awaiting a single item.

Foreign Shipments Foreign shipments are subject to the same conditions as given above, and are sent via New York City, in care of the forwarding agents selected by the customer, such shipments being sent by express, and not covered by marine insurance unless so ordered, our responsibility ceasing upon delivery to the transportation company in good condition. When no special instructions are given, we choose that which, in our opinion, is the best route.

Claims for Shortage We use great care in the selection, checking, packing and re-checking of orders to eliminate the possibility of error. If any discrepancy is discovered, claim should be made immediately. In making such claims, packer's slip should be returned to assist us in our investigation.



A Corner in the Packing Room



AMERICAN OPTICAL COMPANY STOCK

Realizing that our success is in a large measure contingent upon the efficiency of the service we are able to render to customers, we have always been alert to adopt systems and develop ideas by which this service might be further improved.

The greatest factor in the development of our service has been the establishment of a great stock of AOCo goods of those kinds and styles most frequently demanded, or, in short, *regular goods*.

By keeping accurate statistics of sales we are enabled to know the relative demand for every article of AOCo manufacture, and are thereby guided intelligently in the addition of new lines of goods to AOCo Stock List.

With such a vast stock of goods, held always in readiness subject to the call of customers, one may realize the great advantage of ordering goods of *regular* construction, as a change in the slightest detail naturally necessitates making up the goods from the beginning and a consequent loss of time in the filling of orders.

Lists of AOCo stock goods are published at occasional intervals. These lists are printed in convenient pocket form and are of great assistance to anyone who orders optical goods. We will gladly furnish a copy upon request.

The importance of AOCo stock as a feature of our service may be estimated from the fact that more than fifty per cent of our orders are now filled from stock.

Invariably many items on an order can be filled immediately from AOCo stock, in which case we forward those goods at once, unless the order instructs us to "ship complete". Such instructions necessarily delay the entire order until every item is ready and most of the advantage of carrying goods in stock is lost. It is, therefore, advisable not to request a complete shipment, which allows us to forward all goods that are ready without delay.

It is important to bear in mind that with so many and varied classes of goods we should not be expected to make complete shipments as promptly as though our business was confined to one or two lines.



A Corner in the Inspection Department

AMERICAN OPTICAL COMPANY TRADE MARKS

To provide a proper means of identification, the Trade Marks shown below are used on goods of our manufacture. On gold frames and mountings the Trade Mark and Quality Mark appear on the under side of bridge or spring, and the Karat Mark inside both temples. Frames and mountings other than gold are stamped with the Trade Mark and Quality Mark on the under side of bridge or spring.

TRADE MARKS

GOLD				OTHER METALS			
Quality			Mark	Quality			Mark
8 K	-	-	AOCO +	Steel	-	-	©
10 K	-	-	AOCO ⊖	Alumnico	-	-	ALUMNICO
14 K	-	-	AOCO 14K	Alumnico (Pat. styles)	-	-	ALUMNICO PAT.
				Alumnica	-	-	ALUMNICA
				Regaloid	-	-	REGALOID
				Roman Alloy	-	-	ROMAN ALLOY
GOLD FILLED				MISCELLANEOUS			
1-10	10 K	-	© □	Trial Sets and Frames	-	-	AOCO
1-20	10 K	-	© □	Lenses	-	-	AOCO <u>CENTEX</u>
1-30	10 K	-	© □	Spectacle Cases	-	-	©
1-10	10 K Bridge and Temple	-	© ⊗	Machinery	-	-	© or AOCO
GOLD-FILLED PATENTED STYLES				Ajax Strap	-	-	Ⓐ
1-10	10 K	-	Ⓐ ~ □	Imitation Leather	-	-	VICAR
1-10	12 K	-	Ⓐ ~ □	Black Enamel Finish	-	-	JAPTOL
1-10	12 K with 1-5 12 K Bridge and Temple	-	Ⓐ ~ □	Readers	-	-	AMOPTISCOPE
1-10	14 K	-	Ⓐ ~ E				
1-8	14 K	-	Ⓐ ~ H				
1-10	12 K Bridge and Temple	-	Ⓐ ~ ∇				
SILVER							
Coin Silver	-	-	Ⓐ COIN				

For Tagging Frames,
Mountings, etc.



PATENTED LINES

We are now producing over one hundred distinct lines of goods under patents, including eyeglasses, spectacles, springs, guards, studs, lenses, cases, machinery, tools, instruments, in fact, every branch of our product contains examples under this heading. We own and control exclusively many patents and, in addition, manufacture quite extensively under licenses. The completeness of our line, years of extensive experience, and facilities for manufacturing and distributing, place us in position to market optical specialties to best advantage, and it is our earnest desire to attract and encourage the best efforts of the inventive world.

Under the supervision of a resident attorney, we maintain the most extensive and complete Patent Department exclusively devoted to optics in the United States. These facilities are at the service of the trade and its inventors, as all ideas submitted are given careful and confidential consideration. Our complete files of classified information enable us to quickly ascertain whether or not an idea is patentable, and if commercially profitable to manufacture. Very often we prepare and prosecute applications for patents for the inventor when he is not able or does not desire to do so himself and wishes to have us make his specialty. We are always pleased to have ideas and patents submitted for consideration with a view to their production.

Without enumerating our patented goods here, attention is invited to those products illustrated throughout the catalogue and designated as "Patented".

MEASUREMENTS FOR SPECTACLES

Pupillary Distance (P.D.) is the distance between the centers of the pupils. In Fig. I, A to B. The center of eye of a spectacle frame or mounting being difficult to locate, it is customary to measure pupillary distance from the inside of one eyewire or strap to a corresponding point on the other eyewire or strap. In Fig. I, C to D.

Height of Bridge is measured from a line drawn through the horizontal center of the frame (bisecting both temple joints) to the lower edge of crest. In Fig. I, H to G.

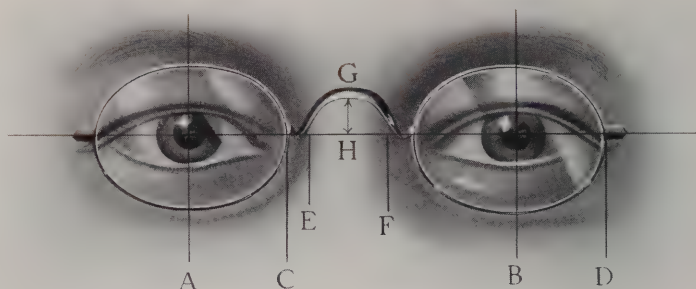


Fig. I

Width of Bridge at Base is the distance between the lower points of the bridge at the place where they cease to touch the patient's nose. In Fig. I, E to F.

Inclination of Bridge is the position of crest, forward or back of the plane of lens. A spectacle frame should set the correct distance from the eye, without permitting the lenses to touch the lashes. The plane of lens is the surface nearest the eye and this measurement is taken from the upper edge of crest to the plane of lenses, forward or back. Fig. II illustrates a bridge with its crest 1.5 mm. forward. In Fig. III the crest is on plane (LS), and in Fig. IV it is 1.5 mm. back of plane of lenses (ELS).

Angle of Crest Fig. III illustrates a bridge with the angle of crest at 45 degrees, which is that regularly furnished on all "SS" Bridges made by us.

Length of Temple is measured from the extreme end of butt to end of tip.

Angular End Piece It is often desirable to have the lenses tilted forward, especially for reading and bifocal glasses. The angular End Piece, as regularly made by us, tilts the lenses forward 12 degrees from the vertical.

Metric System of Measurement is becoming universally used for all optical goods. We urge its general adoption by the optical trade as being far more practical than the Inch System, which is almost obsolete.



Fig. II

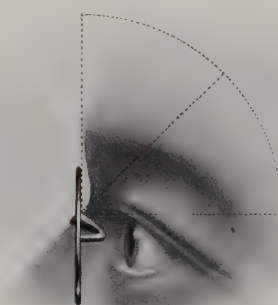
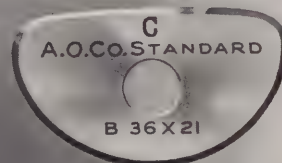
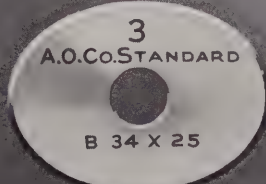
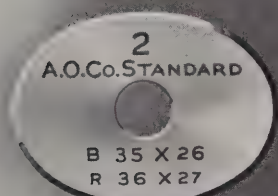
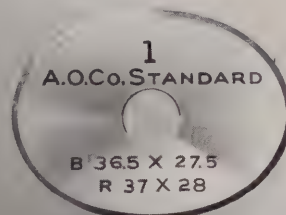


Fig. III



Fig. IV

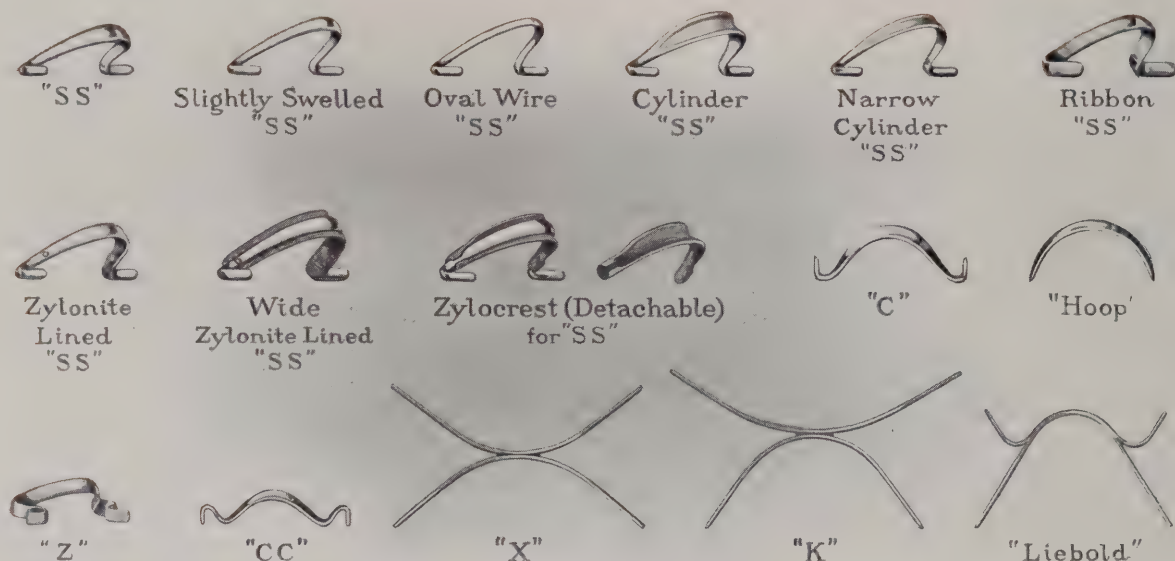


AOCO STANDARD SIZES OF EYES

B Bevel Edge

R Rimless Edge

For special sizes of Lenses and Segments see Lens Section



STYLES OF SPECTACLE BRIDGES

The Saddle or "SS" Bridge on riding, half-riding and cable temple frames has virtually superseded all other styles and appeals to the oculist and optometrist for the reason that it presents the distinct advantage of a perfect and ready adjustment to almost every case. It rests lightly upon the nose yet furnishes a firm support for the lenses. In England it is frequently termed the "W" Bridge.

A few of the older styles of bridges still have a limited demand and no doubt possess advantages in certain cases. Many of these are shown in the above illustration some of which we mention below:

The Cylinder "SS" Bridge conforms in style to the "SS" Bridge and possesses all of its advantages of adjustment. Its peculiar feature is a grooved or cylindrical shaped crest, preventing contact of upper and lower edge of bridge with the nose and insuring greater comfort to the wearer.

Zylocrest A detachable zylonite lining for "SS" Bridges. No wires or metal clips are necessary. Patented.

The "C" or English "Crank" Bridge is usually preferred for straight temple frames, as it may be worn with comfort in almost any position on the nose.

The "Hoop" Bridge has its use principally on frames having very large or round eyes. It is also employed (when made of round wire) on frames having reversible temples. This form of bridge allows a narrower distance between eyes than any other form, the entire space being taken up by the nose.

The "Liebola", "X" and "K" Bridges provide two points of attachment for each eyewire, making a very rigid front to the Frame. These styles, however, are very expensive to manufacture.

The "Z" Bridge is manufactured especially for the Chinese trade.

Any of the styles illustrated above furnished on any spectacles when so ordered.
For styles of bridges regularly furnished on frames and mountings, see page 23.

AMERICAN OPTICAL COMPANY SYSTEM FOR SADDLE ("SS") BRIDGES

The system of spectacle bridges illustrated on pages 32 to 35, inclusive, is generally known as the Saddle System, abbreviated "SS".

The illustrations show, first, the contour of bridges and depth, and width of base for each bridge; second, the side view or profile indicates height of each bridge, and position of crest with reference to plane of lenses.

If size of bridges required is not given in the following illustrations it will be necessary to state all dimensions in ordering or send samples.

In ordering spectacle frames in this system it is necessary to state size of eye and letters denoting bridge measurements. The letters L, M, N, O, P, etc., alone and when combined with height number carry all bridge measurements, including pupillary distance (P. D.) based on an O eye frame as a standard with regular shanks.

LENGTH OF "SS" BRIDGE SHANKS

Regular Shanks 5 mm. long, Crest of Bridge 1.5 mm. forward of plane of lenses

Long Shanks (LS) 6.5 mm. long, Crest of Bridge on plane of lenses

Extra long Shanks (ELS) 8 mm. long, Crest of Bridge 1.5 mm. back of plane of lenses

PUPILLARY DISTANCE

When frames other than O eye are wanted the pupillary distance (P. D.) varies from that given in the "SS" tables directly as the size of eye increases or lessens as follows:

VARIATION IN P. D. FROM O EYE GIVEN IN "SS" BRIDGE TABLES, PAGES 32 TO 35.

	Bevel Edge	Rimless Edge		Bevel Edge	Rimless Edge
3 eye lessens the P. D.	3.8 mm.		oo eye increases the P. D.	1.9 mm.	1.5 mm.
2 eye lessens the P. D.	2.8 mm.	2.5 mm.	ooo eye increases the P. D.	3.2 mm.	2.5 mm.
1 eye lessens the P. D.	1.3 mm.	1.5 mm.	oooo eye increases the P. D.	6.7 mm.	6 mm.
			Jumbo eye increases the P. D.	7.6 mm.	6.9 mm.

It will be noted by reference to the illustration on page 29 that AOCo standard sizes of eyes vary according to whether bevel or rimless edge lenses are used. These variations affect the P. D. of frames and mountings correspondingly. The P. D. given for AOCo bridge systems is based on O eye bevel edge, the exact eye length being 37.8 mm.

HEIGHT OF "SS" BRIDGES

Height of "SS" Bridges above center line is denoted by the addition of:

$\frac{1}{2}$ to letter for 2 mm. in height	$2\frac{1}{2}$ to letter for 8 mm. in height
1 to letter for 3.5 mm. in height	3 to letter for 9.5 mm. in height
$1\frac{1}{2}$ to letter for 5 mm. in height	$3\frac{1}{2}$ to letter for 11 mm. in height
2 to letter for 6.5 mm. in height	4 to letter for 12.5 mm. in height

AMERICAN OPTICAL COMPANY SYSTEM FOR "C" AND HOOP BRIDGES







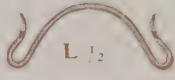

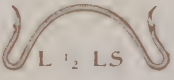



























































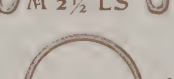



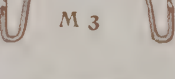











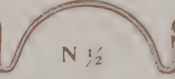

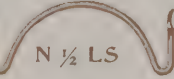



In this system (see page 36) "C" Bridges are indicated by arbitrary numbers C1 to C29. Inclination of "C" Bridges is regularly 1.5 mm. forward of plane; if desired "C" Bridges may be had on plane but it is not practical to make them back of plane.

Hoop Bridges are numbered arbitrarily from H1 to H6.

The P. D. and height of "C" and Hoop Bridges are given in the tables on page 36.

Information on taking measurements for spectacles given on page 28.

For AOCo standard sizes of eyes see page 29.

Dimensions			Inclination		Inclination		Inclination	
P. D.	Height	Base	1.5 mm. Front of Plane		On Plane		1.5 mm. Back of Plane	
55	0	16						
55	2	16						
55	3.5	16						
55	5	16						
55	6.5	16						
58	0	16						
58	2	16						
58	3.5	16						
58	5	16						
60	6.5	16						
60	8	17						
60	9.5	17						
62	0	19						
62	2	19						
62	3.5	19						



















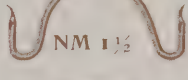

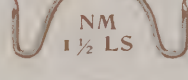



































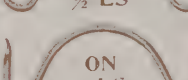





















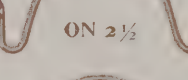

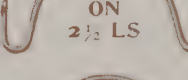

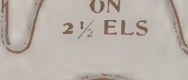

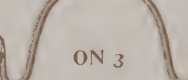





American Optical Company System of Saddle ("SS") Bridges

P. D. Based on O Eye. All Dimensions in mm.

Dimensions			Inclination 1.5 mm. Front of Plane		Inclination On Plane		Inclination 1.5 mm. Back of Plane	
P. D.	Height	Base						
62	5	19	 N 1 1/2		 N 1 1/2 LS		 N 1 1/2 ELS	
62	6.5	19	 N 2		 N 2 LS		 N 2 ELS	
63	8	21	 N 2 1/2		 N 2 1/2 LS		 N 2 1/2 ELS	
63	9.5	21	 N 3		 N 3 LS		 N 3 ELS	
65	0	22	 O		 O LS		 O ELS	
65	3.5	22	 O 1		 O 1 LS		 O 1 ELS	
65	5	22	 O 1 1/2		 O 1 1/2 LS		 O 1 1/2 ELS	
65	6.5	22	 O 2		 O 2 LS		 O 2 ELS	
66	9.5	24	 O 3		 O 3 LS		 O 3 ELS	
66	12.5	24	 O 4		 O 4 LS		 O 4 ELS	
68	0	25	 P		 P LS		 P ELS	
68	3.5	25	 P 1		 P 1 LS		 P 1 ELS	
68	6.5	25	 P 2		 P 2 LS		 P 2 ELS	
68	9.5	25	 P 3		 P 3 LS		 P 3 ELS	
68	12.5	25	 P 4		 P 4 LS		 P 4 ELS	

American Optical Company System of Saddle ("SS") Bridges

P. D. Based on O Eye. All dimensions in mm.

Dimensions			Inclination 1.5 mm. Front of Plane		Inclination On Plane		Inclination 1.5 mm. Back of Plane	
P. D.	Height	Base						
62	0	16						
62	2	16						
62	3.5	16						
62	5	16						
62	6.5	16						
63	8	17						
63	9.5	17						
65	0	19						
65	2	19						
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65	5	19						
65	6.5	19						
66	8	21						
66	9.5	21						
68	3.5	22						



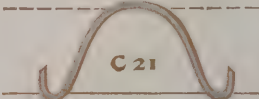


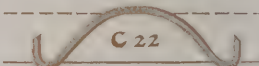


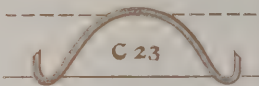


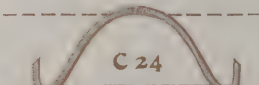


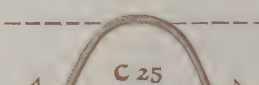
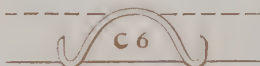




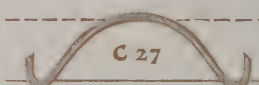



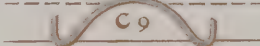

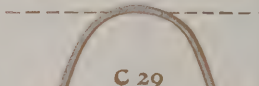

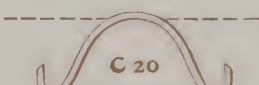

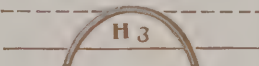
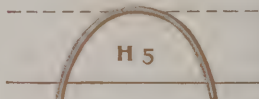
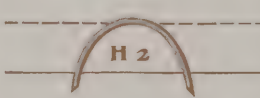
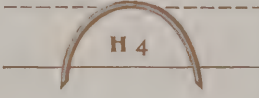
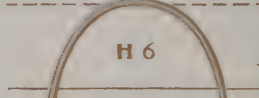
American Optical Company System of Saddle ("SS") Bridges

P. D. Based on O Eye. All Dimensions in mm.

Dimensions			Inclination 1.5 mm. Front of Plane		Inclination On Plane		Inclination 1.5 mm. Back of Plane	
P. D.	Height	Base						
58	0	19	 MN		 MN LS		 MN ELS	
58	2	19	 MN $\frac{1}{2}$		 MN $\frac{1}{2}$ LS		 MN $\frac{1}{2}$ ELS	
58	3.5	19	 MN 1		 MN 1 LS		 MN 1 ELS	
58	5	19	 MN $1\frac{1}{2}$		 MN $1\frac{1}{2}$ LS		 MN $1\frac{1}{2}$ ELS	
58	6.5	19	 MN 2		 MN 2 LS		 MN 2 ELS	
60	8	21	 MN $2\frac{1}{2}$		 MN $2\frac{1}{2}$ LS		 MN $2\frac{1}{2}$ ELS	
60	9.5	21	 MN 3		 MN 3 LS		 MN 3 ELS	
62	0	22	 NO		 NO LS		 NO ELS	
62	3.5	22	 NO 1		 NO 1 LS		 NO 1 ELS	
62	5	22	 NO $1\frac{1}{2}$		 NO $1\frac{1}{2}$ LS		 NO $1\frac{1}{2}$ ELS	
62	6.5	22	 NO 2		 NO 2 LS		 NO 2 ELS	
63	9.5	24	 NO 3		 NO 3 LS		 NO 3 ELS	
65	0	25	 OP		 OP LS		 OP ELS	
65	3.5	25	 OP 1		 OP 1 LS		 OP 1 ELS	
65	6.5	25	 OP 2		 OP 2 LS		 OP 2 ELS	
65	9.5	25	 OP 3		 OP 3 LS		 OP 3 ELS	

American Optical Company System of Saddle ("SS") Bridges

P. D. Based on O Eye. All dimensions in mm.

Dimensions		"C" Bridges	Dimensions		"C" Bridges	Dimensions		"C" Bridges
P. D. mm.	Height mm.		P. D. mm.	Height mm.		P. D. mm.	Height mm.	
56	3.5		60	8.		64	11.	
56	5.		62	3.5		66	6.5	
58	0		62	5.		66	8.	
58	3.5		62	6.5		66	9.5	
58	5.		62	8.		66	11.	
58	6.5		62	9.5		66	12.5	
60	0		64	5.		68	8.	
60	3.5		64	6.5		68	11.	
60	5.		64	8.		68	14.5	
60	6.5		64	9.5				
Dimensions		"Hoop" Bridges	Dimensions		"Hoop" Bridges	Dimensions		"Hoop" Bridges
P. D. mm.	Height mm.		P. D. mm.	Height mm.		P. D. mm.	Height mm.	
54	3.5		58	5.		60	9.5	
56	6.5		58	8.		62	11.	

American Optical Company System of "C" and "Hoop" Bridges

P. D. based on O Eye. "C" Bridges in AOCo assortment shown in outline. All dimensions in mm.

Dotted line indicates height. Solid line indicates center

AOCO BRIDGE ASSORTMENTS

AOCO ASSORTMENT OF "SS" BRIDGES

We regularly make all Riding, Half Riding and Cable temple frames and mountings with "SS" Bridges. Unless otherwise ordered they are furnished in AOCO Assortment, which has been adopted after careful study of the requirements of the trade. The assortment furnished in each dozen comprises the following bridges:

Pairs	Size	Pairs	Size	Pairs	Size
1	M 1	2	N 1	1	N 1½ LS
1	M 1 LS	1	N 1 LS	1	N 2
1	M 1½ ELS	1	N 1 ELS	1	N 2½
1	M 2 LS	1	N 1½		

AOCO "D" ASSORTMENT OF "SS" BRIDGES FOR CHILDREN

On Riding, Half Riding and Cable temple frames 2 and 3 eye size or when the order specifies "for Children", we supply AOCO Assortment of Bridges for Children unless otherwise ordered. The assortment furnished in each dozen comprises the following bridges:

Pairs	Size	Pairs	Size	Pairs	Size
1	L LS	1	M LS	1	M 1½
1	L ELS	1	M ELS	1	M 1½ LS
1	L 1	1	M 1	1	N 1
1	L 1 LS	1	M 1 LS	1	N 1 LS

AOCO "B" ASSORTMENT OF "SS" BRIDGES

This dozen assortment is regularly supplied on the following frames and mountings having full width oval wire "SS" bridges: Nos. 308, 380, 1006, 1007, 1008, 1106, 1107, 1108, 1196.

Pairs	Size	Pairs	Size	Pairs	Size
4	M 2 LS	4	N 2	4	N 1½

AOCO ASSORTMENT OF "C" BRIDGES

On straight temple frames we regularly supply "C" Bridges in the following dozen assortment unless otherwise specified:

Pairs	Size	Pairs	Size	Pairs	Size
1	C 6	2	C 15	2	C 20
2	C 10	1	C 16		
2	C 11	2	C 19		

AOCO "BC" ASSORTMENT OF "C" BRIDGES

The dozen assortment given below is regularly supplied on the following straight temple frames: Nos. 10, 1000, 1001, 1004, 1005, 1100, 1101, 1104, 1105.

Pairs	Size	Pairs	Size	Pairs	Size
4	C 10	4	C 15	4	C 19

AOCO EUROPEAN BRIDGE ASSORTMENTS

As some of the bridges in AOCO English dozen assortments, regularly furnished on all European orders, are not listed in the saddle "SS" System, we give below the dimensions on each size in mm.

AOCO "E" ENGLISH ASSORTMENT OF "SS" BRIDGES FOR RIDING TEMPLE

Pairs	P. D. (O Eye)	Height	Inclination	Pairs	P. D. (O Eye)	Height	Inclination
1	58	0	on plane	1	62	3.5	on plane
1	58	3.5	+1.5	1	62	3.5	-1.5
1	60	5	+1.5	1	62	3.5	-3.5
1	60	6.5	-3.5	1	62	5	-3.5
1	62	0	on plane	1	62	6.5	-3.5
1	62	3.5	-1.5	1	65	6.5	-3.5

AOCO "F" ENGLISH ASSORTMENT OF "SS" BRIDGES FOR STRAIGHT TEMPLE

Pairs	P. D. (O Eye)	Height	Inclination	Pairs	P. D. (O Eye)	Height	Inclination
1	58	5	+1.5	2	62	9.5	+1.5
2	58	6.5	+1.5	3	62	6.5	+3.5
2	62	3.5	+1.5	1	65	9.5	+3.5
				1	65	6.5	+3.5

AOCO English Assortment of "C" Bridges same as regular AOCO Assortment of "C" Bridges, in P. D. and Height.

AOCO SPECIAL BRIDGE ASSORTMENTS

AOCO ASSORTMENT OF "X", "K", AND LIEBOLD BRIDGES

Dozen assortment of "X" Bridges, P. D. based on O Eye, no height.

Pairs	P. D. (O Eye)	Pairs	P. D. (O Eye)	Pairs	P. D. (O Eye)
3	60	6	63	3	66

Dozen assortment of "K" Bridges, P. D. based on O Eye.

Pairs	P. D. (O Eye)	Height	Pairs	P. D. (O Eye)	Height	Pairs	P. D. (O Eye)	Height
3	60	3.5	6	63	5	3	66	6.5

Dozen assortment of Liebold Bridges, P. D. based on O Eye.

Pairs	P. D. (O Eye)	Height	Pairs	P. D. (O Eye)	Height	Pairs	P. D. (O Eye)	Height
3	60	3.5	6	63	5	3	66	6.5

AOCO ASSORTMENT OF GRAB FRONTS AND GRAB BACKS

These assortments are made to fit over the regular AOCO assortments of "SS" and "C" Bridges.

Dozen assortment of "Medio" or Grab Front for "SS" Bridges, P. D. based on O Eye.

Pairs	P. D. (O Eye)	Height	Pairs	P. D. (O Eye)	Height
2	58	5	6	62	6.5
3	60	6.5	1	63	8

Dozen assortment of "Medio" or Grab Front for "C" Bridges, P. D. based on O Eye.

Pairs	P. D. (O Eye)	Height	Pairs	P. D. (O Eye)	Height
2	58	3	4	62	8
4	60	6.5	2	63	8

Dozen assortment of Grab Backs, P. D. based on O Eye (Half-eye sizes have P. D. 1.3 mm. longer).

Pairs	P. D. (O Eye)	Height	Pairs	P. D. (O Eye)	Height
3	58	5	1	62	6.5
1	60	6.5	1	63	8
6	62	5			

AOCO ASSORTMENT OF FINGER-PIECE EYEGLASS BRIDGES

For equivalent P. D. on other sizes of eyes, see Finger-piece Eyeglass Section. Dozen assortment of Finger-piece Eyeglasses, P. D. based on O Eye. One pair each as follows:

Dimension No.	P. D. (O Eye)	Height	Inclination	Dimension No.	P. D. (O Eye)	Height	Inclination
412	57	2.	3.5	622	60	3.5	3.5
422	57	3.5	3.5	633	60	5.	5.
512	59	2.	3.5	712	62	2.	3.5
522	59	3.5	3.5	722	62	3.5	3.5
533	59	5.	5.	733	62	5.	5.
612	60	2.	3.5	744	62	6.5	6.5

To determine the exact P. D. for any eye from 3 to Jumbo subtract or add variations in table given on page 20.

GOLD AND SILVER SPECTACLES AND EYEGLASSES

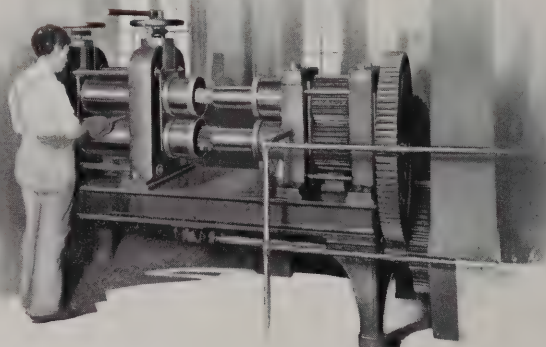


GOLD AND SILVER SPECTACLES AND EYEGLASSES

THIS department converts into frames, mountings and materials, gold and silver to an amount approximating one million dollars annually, giving employment to more than two hundred persons.

Production Its production now exceeds

50,000 dozen frames and mountings per year, furnishing an excellent illustration of the growth of the business, when compared with the yearly sales but thirty years since when the total production of this department was but 1402 dozen gold and 1136 dozen silver frames. At that time it was the custom for each workman to make the complete frame, filing it out by hand, a slow and expensive process, requiring long and careful training, with a daily average of about six frames to each man.



Rolling Flat Stock in
Gold Department

The Finished Frame To-day the finished frame is the result of over two hundred distinct operations, passing through sixty hands, each one operating machinery designed and built by us, and consequently becoming expert in the part



Soldering Gold Goods



Pouring Gold Ingots



Weighing Gold Wire to
be made into Spectacles

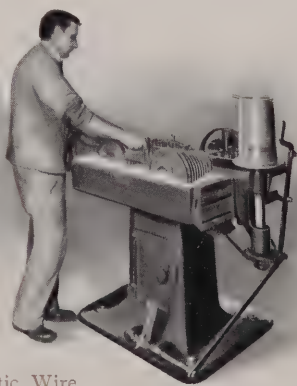
assigned him. Conditions such as formerly existed would have rendered our present production a difficult task indeed.

Gold and Silver Comparatively These comparative figures also serve to indicate the increase in the use of gold optical goods over those made from silver; for, while in the year 1877 they were made in almost equal quantities, the demand for gold constantly increased, while the use of silver declined with each succeeding year, until their present production is very limited.

Quality of Stock In the manufacture of gold goods, the quality of stock is primarily of the greatest importance, and demands experience in handling, not only to preserve the wearing qualities, but to maintain a uniform fineness, and it is with pride we refer to the fact that our trade marks are accepted everywhere in America, as a guarantee of the fineness of gold, while many foreign countries require a government stamp to insure the same end.

It is our purpose to guard this mark of confidence by maintaining the highest standard of quality at all times.

Karat of Gold Gold goods are regularly made in 10 and 14 karat, and are stamped as follows: 10 karat, "⊖"; and



Automatic Wire
Drawing Machine



Blanking Gold Material
from Flat Stock

14 karat, "14K"; the initials "AOCO" preceding the karat mark when placed in the crest of bridge or under side of springs.

Bridges and Assortment Gold straight temple frames and mountings are made in AOCO assortment with "C" bridges; riding, half-riding and cable temple frames and mountings are made in AOCO assortment with "SS" bridges unless otherwise ordered.

Temples Gold riding frames except cable are regularly supplied with pear tip temples unless otherwise ordered.

Straps Gold frameless mountings are regularly made with rounded (R) straps; they may be had with flat (F) straps if so ordered. Rounded (R) or flat (F) straps are made heavy weight when so ordered.

End Pieces See illustrations for styles of gold end pieces on following pages.

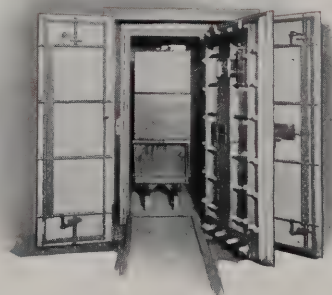
Springs Gold eyeglass frames and mountings are made with regular styles and lengths of springs. (See Material Section.)

Guards Gold eyeglass frames and mountings are made with regular styles of guards. (See Material Section.)

Handles All styles of handles are shown in the Material Section.

Spectaclettes Gold spectacle frames and mountings are regularly furnished with P. D's. assorted 58, 60 and 63 mm., based on O eye.

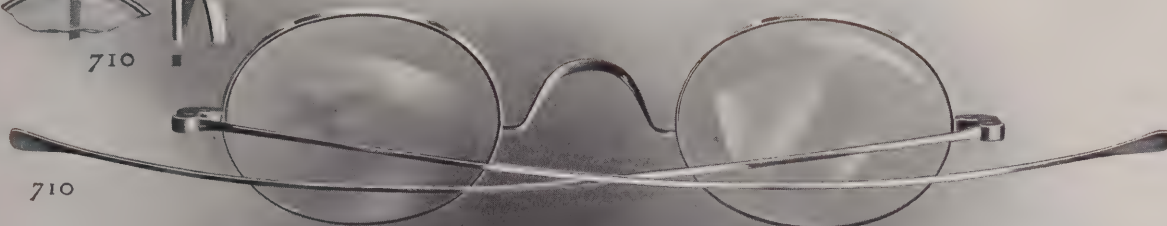
AOCO Stock We carry in stock 4000 to 6000 dozen gold frames and mountings of regular styles and weights, from which we are able to fill orders for regular lines promptly. We have devoted much time and careful consideration to the development of our gold department, and congratulate ourselves on a constant improvement in service, which inspires us with a feeling of confidence when soliciting patronage in this important line. A list of goods carried in AOCO stock will be supplied upon application.



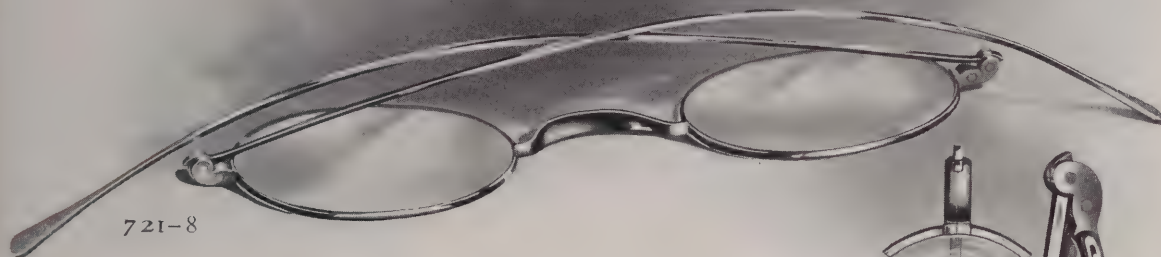
Entrance to Vault
in Gold Department



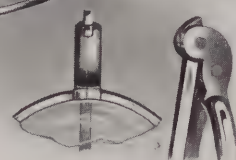
710



710



721-8



721-8

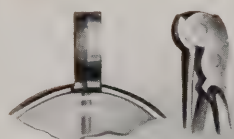
GOLD SPECTACLE FRAMES

CATALOGUE NUMBER

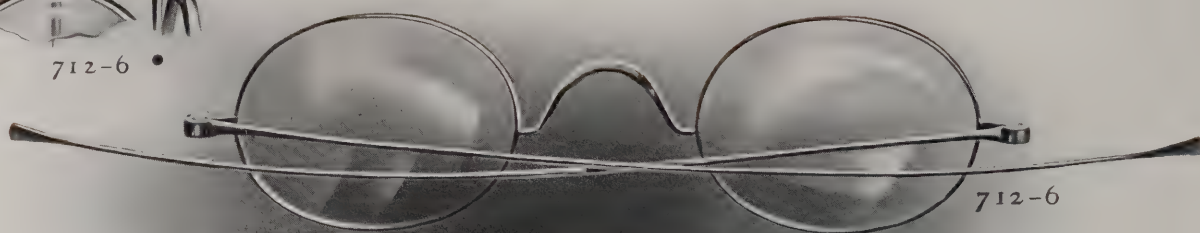
DESCRIPTION

Straight Temple, Rounded End Piece

Cap Joint						Solid Joint						Flat Eyewire, Flat Temple
700	-	-	-	-	-	700.8	-	-	-	-	-	Light
710	-	-	-	-	-	710.8	-	-	-	-	-	Medium
710 1/4	-	-	-	-	-	710 1/4.8	-	-	-	-	-	Heavier
720	-	-	-	-	-	720.8	-	-	-	-	-	Medium heavy
720 1/4	-	-	-	-	-	720 1/4.8	-	-	-	-	-	Heavier
730	-	-	-	-	-	730.8	-	-	-	-	-	Heavy
740	-	-	-	-	-	740.8	-	-	-	-	-	Extra heavy
Oval Eyewire, Flat Temple												
701	-	-	-	-	-	701.8	-	-	-	-	-	Light
711	-	-	-	-	-	711.8	-	-	-	-	-	Medium
711 1/4	-	-	-	-	-	711 1/4.8	-	-	-	-	-	Heavier
721	-	-	-	-	-	721.8	-	-	-	-	-	Medium heavy
721 1/4	-	-	-	-	-	721 1/4.8	-	-	-	-	-	Heavier
731	-	-	-	-	-	731.8	-	-	-	-	-	Heavy
741	-	-	-	-	-	741.8	-	-	-	-	-	Extra heavy
Oval Eyewire, Round Temple												
702	-	-	-	-	-	702.8	-	-	-	-	-	Light
712	-	-	-	-	-	712.8	-	-	-	-	-	Medium
712 1/4	-	-	-	-	-	712 1/4.8	-	-	-	-	-	Heavier
722	-	-	-	-	-	722.8	-	-	-	-	-	Medium heavy
722 1/4	-	-	-	-	-	722 1/4.8	-	-	-	-	-	Heavier
732	-	-	-	-	-	732.8	-	-	-	-	-	Heavy
742	-	-	-	-	-	742.8	-	-	-	-	-	Extra heavy
Oval Eyewire, Half-round Temple												
703	-	-	-	-	-	703.8	-	-	-	-	-	Light
713	-	-	-	-	-	713.8	-	-	-	-	-	Medium
713 1/4	-	-	-	-	-	713 1/4.8	-	-	-	-	-	Heavier
723	-	-	-	-	-	723.8	-	-	-	-	-	Medium heavy
723 1/4	-	-	-	-	-	723 1/4.8	-	-	-	-	-	Heavier
733	-	-	-	-	-	733.8	-	-	-	-	-	Heavy
743	-	-	-	-	-	743.8	-	-	-	-	-	Extra heavy



712-6

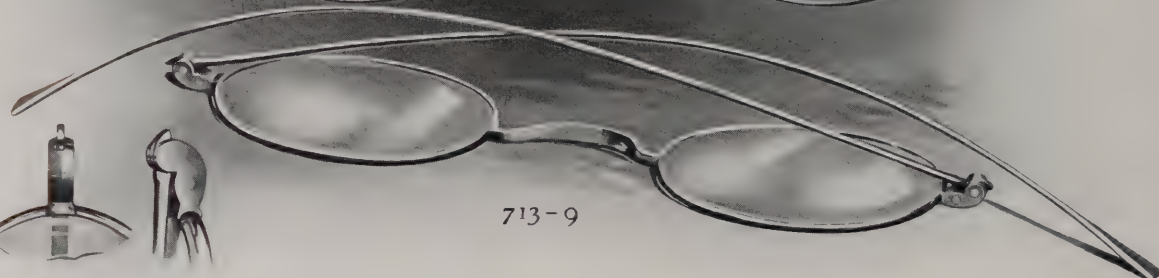


712-6



713-9

713-9



GOLD SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Straight Temple, Beveled End Piece

Cap Joint

711.6
711 1/4.6
721.6
721 1/4.6
731.6
741.6

Solid Joint

711.9
711 1/4.9
721.9
721 1/4.9
731.9
741.9

Oval Eyewire, Flat Temple

Medium
Heavier
Medium heavy
Heavier
Heavy
Extra heavy

Oval Eyewire, Round Temple

702.0
712.0
712 1/2.0
722.0
722 1/2.0
732.0
742.0

702.0
712.0
712 1/2.0
722.0
722 1/2.0
732.0
742.0

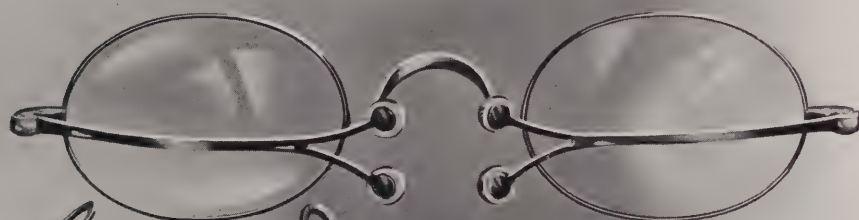
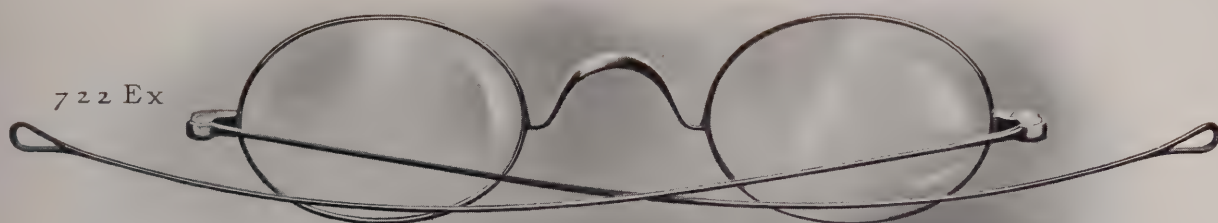
Light
Medium
Heavier
Medium heavy
Heavier
Heavy
Extra heavy

Oval Eyewire, Half-round Temple

703.0
713.0
713 1/2.0
723.0
723 1/2.0
733.0
743.0

703.0
713.0
713 1/2.0
723.0
723 1/2.0
733.0
743.0

Light
Medium
Heavier
Medium heavy
Heavier
Heavy
Extra heavy



721 short PT



721 short OT

GOLD SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Straight Temple, Angular Rounded End Piece

Cap Joint	Solid Joint	Shoulder Bridge, Round Open Tip Temples
722 EN	722S EN	Medium heavy
722 1/4 EN	722 1/4S EN	Heavier

GOLD SHORT TEMPLE SPECTACLE FRAMES

CATALOGUE NUMBER

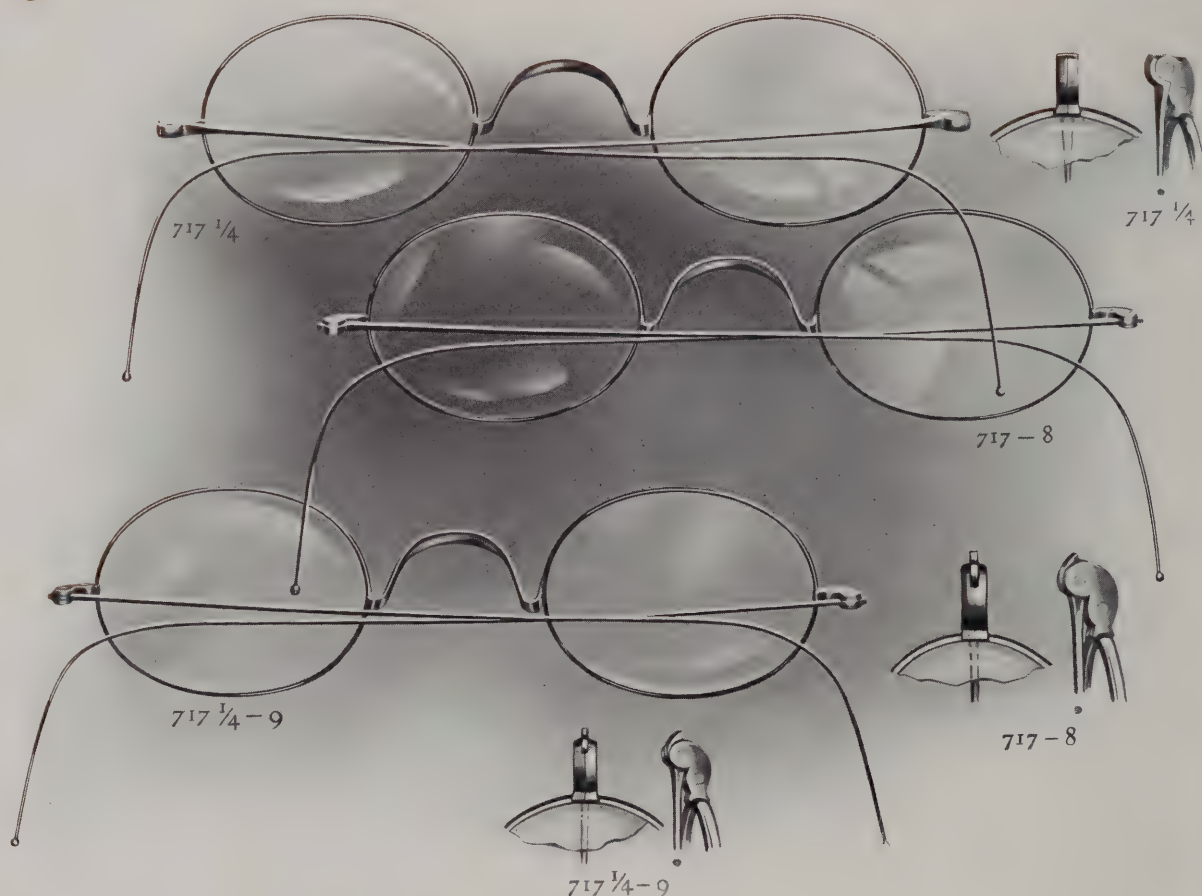
DESCRIPTION

Short Temple, Rounded End Piece

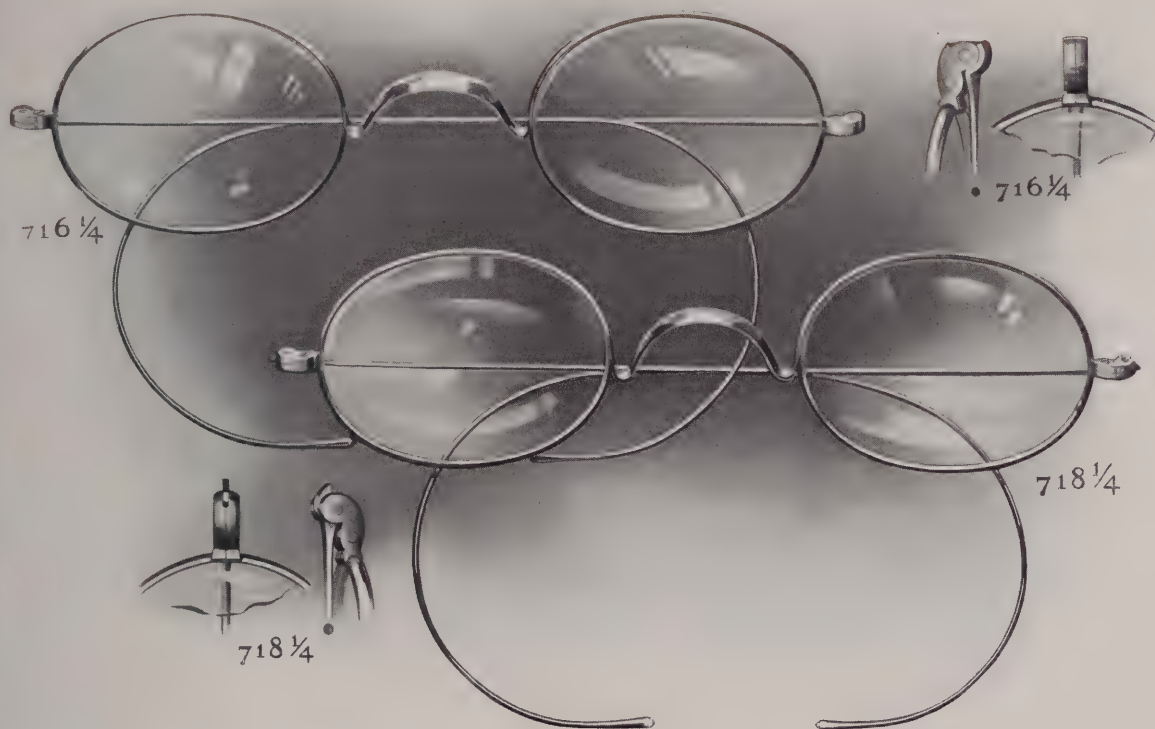
Padded Tip, Cork Pads	Open Tip	Cap Joint
721 Short P.T. - - -	721 Short O.T. - - -	Medium heavy
721 1/4 Short P.T. - - -	721 1/4 Short O.T. - - -	Heavier

Specify "Short Temple" when ordering.

Short Temple Frames made with "C" or "SS" Bridges as ordered.



GOLD SPECTACLE FRAMES



GOLD SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Riding Temple, Rounded End Piece

Cap Joint

706

706 1/8

716

716 1/8

716 1/4

716 3/8

716 1/2

716 5/8

716 3/4

*720

730

Solid Joint

708

708 1/8

718

718 1/8

718 1/4

718 3/8

718 1/2

718 5/8

718 3/4

*728

738

Lightest

Heavier bridge

Light

Heavier bridge

Medium

Heavier bridge

Medium heavy

Heavier bridge

Heavy

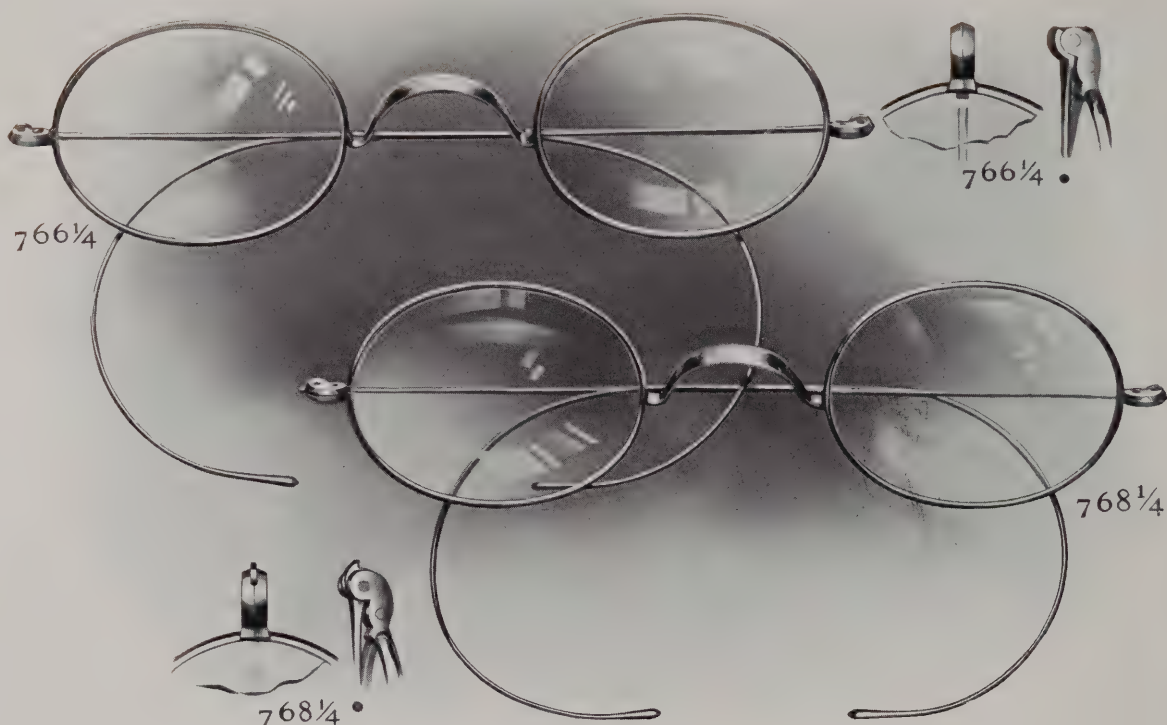
Extra heavy

Heavier

We make a 705 series same as 706 etc., except round eyewire for grooved lenses.

*Style and weight of old No. 721 Riding.

Above Frames, 716 1/8, 718 1/8 and heavier, supplied with Cable Temples when so ordered. See page 49.



GOLD SPECTACLE FRAMES

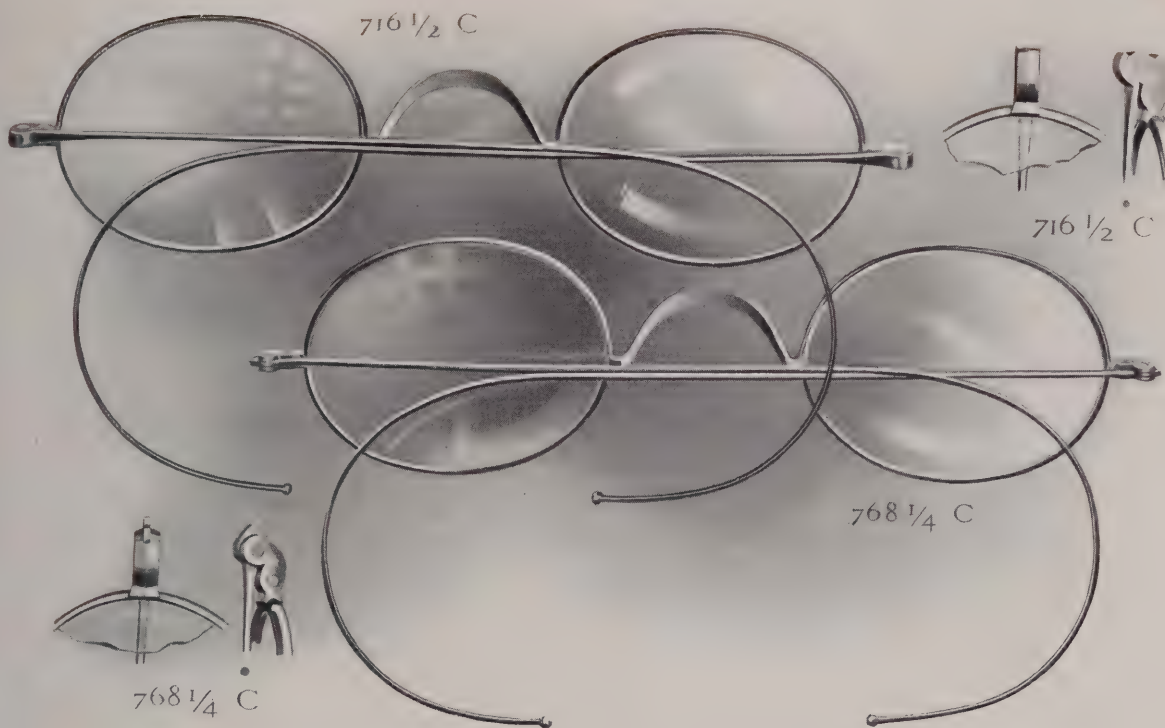
CATALOGUE NUMBER

DESCRIPTION

Riding Temple, Beveled End Piece

Cap Joint					Solid Joint						Extra Finish
766	-	-	-	-	768	-	-	-	-	-	Light
766 1/8	-	-	-	-	768 1/8	-	-	-	-	-	Heavier bridge
766 1/4	-	-	-	-	768 1/4	-	-	-	-	-	Medium
766 3/8	-	-	-	-	768 3/8	-	-	-	-	-	Heavier bridge
766 1/2	-	-	-	-	768 1/2	-	-	-	-	-	Medium heavy
766 5/8	-	-	-	-	768 5/8	-	-	-	-	-	Heavier bridge
766 3/4	-	-	-	-	768 3/4	-	-	-	-	-	Heavy
770	-	-	-	-	778	-	-	-	-	-	Extra heavy
780	-	-	-	-	788	-	-	-	-	-	Heavier

Above frames, 766 1/8, 768 1/8 and heavier, supplied with Cable temples when so ordered. See page 49.



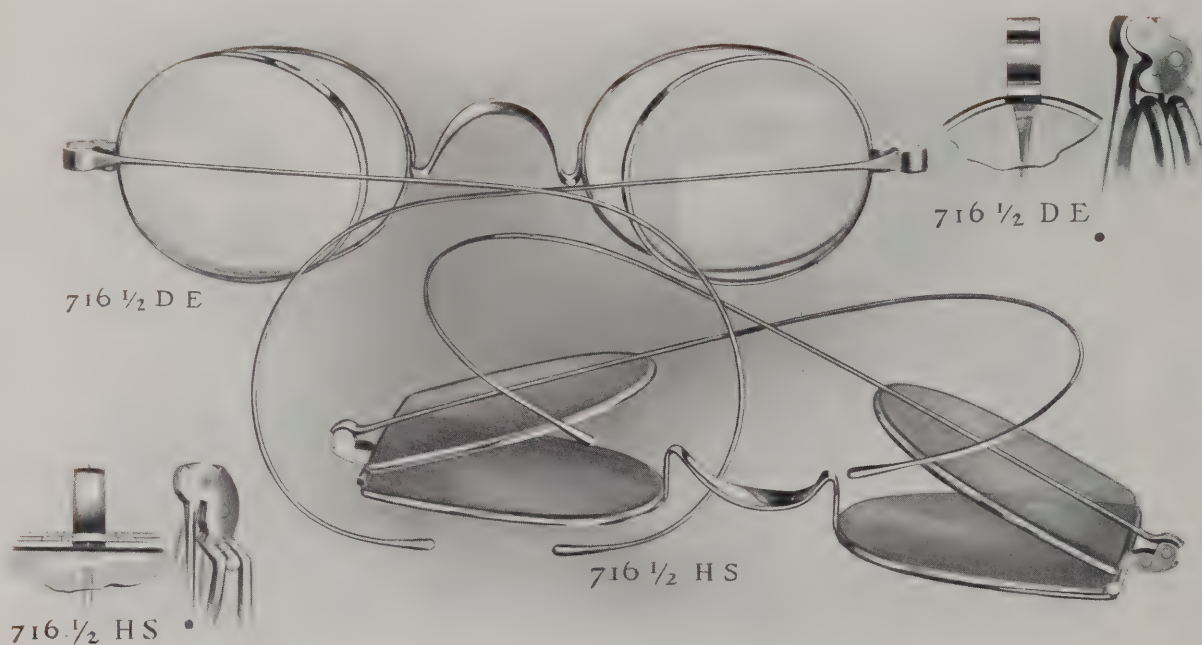
GOLD SPECTACLE FRAMES

CATALOGUE NUMBER	DESCRIPTION	CATALOGUE NUMBER	DESCRIPTION
Cable Temple, Rounded End Piece			
Cap Joint	Front	Solid Joint	Front
*716 1/8 C	716 1/8	*718 1/8 C	718 1/8
*716 1/4 C	716 1/4	*718 1/4 C	718 1/4
716 3/8 C	716 3/8	718 3/8 C	718 3/8
716 1/2 C	716 1/2	718 1/2 C	718 1/2
716 5/8 C	716 5/8	718 5/8 C	718 5/8
716 3/4 C	716 3/4	718 3/4 C	718 3/4
*726 C	726	*728 C	728
Cable Temple, Beveled End Piece			
766 1/8 C	766 1/8	768 1/8 C	768 1/8
*766 1/4 C	766 1/4	*768 1/4 C	768 1/4
766 3/8 C	766 3/8	768 3/8 C	768 3/8
766 1/2 C	766 1/2	768 1/2 C	768 1/2
766 5/8 C	766 5/8	768 5/8 C	768 5/8
766 3/4 C	766 3/4	768 3/4 C	768 3/4
776 C	776	778 C	778

*Attention is called to the following changes in numbers for Spectacle Frames listed above:

- New Nos. 716 1/8 C, 718 1/8 C Same as old Nos. 716 1/2 Cable, 718 1/2 Cable
- New Nos. 716 1/4 C, 718 1/4 C Same as old Nos. 726 Cable, 728 Cable
- New Nos. 726 C, 728 C Same as old Nos. 736 Cable, 738 Cable
- New Nos. 766 1/4 C, 768 1/4 C Same as old Nos. 766 3/4 Cable, 768 3/4 Cable

NOTE.—When Frames with Half-cable Temples are desired, add letter “H” to above number, thus, 716 1/4 HC.
For description of weights 1/8, 1/4, 3/8, etc., see pages 47 and 48.



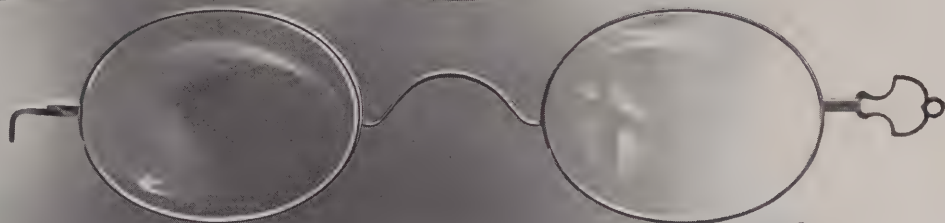
GOLD SPECTACLE FRAMES — DOUBLE EYE

CATALOGUE NUMBER										DESCRIPTION
Oval Shape										
Riding Temple			Cable Temple			Straight Temple Flat			Rounded End Piece, Cap Joint "SS" Bridge	
716½ D.E.	-	-	716½ D.E.C.	-	-	721 D.E.	-	-	-	Medium heavy
726 D.E.	-	-	726 D.E.C.	-	-	-	-	-	-	Heavier
736 D.E.	-	-	736 D.E.C.	-	-	731 D.E.	-	-	-	Extra heavy
*Horseshoe Shape										
716½ H.S.	-	-	716½ H.S.C.	-	-	721 H.S.	-	-	-	Medium heavy
726 H.S.	-	-	726 H.S.C.	-	-	-	-	-	-	Heavier
736 H.S.	-	-	736 H.S.C.	-	-	731 H.S.	-	-	-	Extra heavy

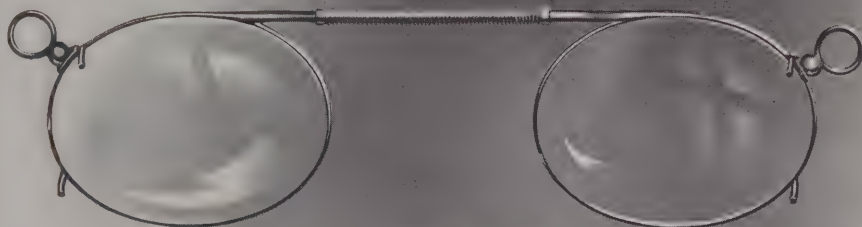
* For sizes of Horseshoe Eyes, see the Introductory Section of this Catalogue.



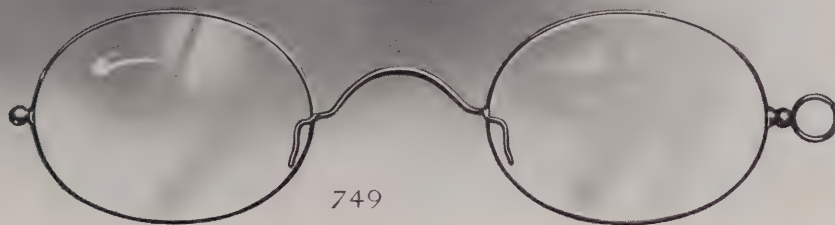
719



729



739



749

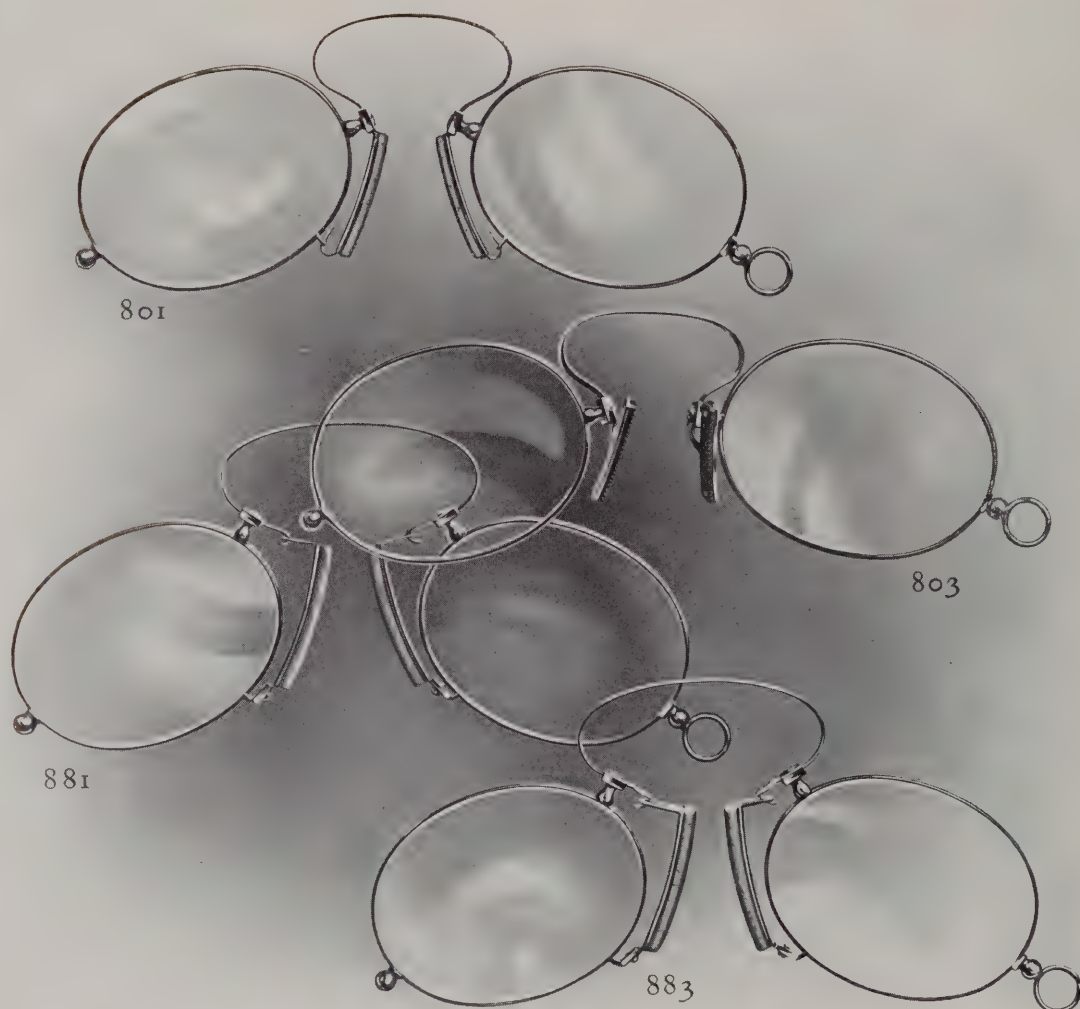
GOLD GRAB FRONT FRAMES

CATALOGUE NUMBER				DESCRIPTION			
Oval Wire Bridge		Oval Wire Bridge		Rigid Bar Spring			
719	-	*729	-	739	-	-	Medium
719 ¹ / ₈	-	729 ¹ / ₈	-	-	-	-	Heavier bridge
719 ¹ / ₄	-	729 ¹ / ₄	-	739 ¹ / ₄	-	-	Heavier
719 ¹ / ₂	-	729 ¹ / ₂	-	739 ¹ / ₂	-	-	Heavy

GOLD MEDIO GRAB FRONT FRAMES. — PATENTED

CATALOGUE NUMBER				DESCRIPTION			
For "SS" Bridge		For "C" Bridge		Round Wire Bridge			
749	-	759	-	-	-	-	Medium
749 ¹ / ₈	-	759 ¹ / ₈	-	-	-	-	Heavier bridge
749 ¹ / ₄	-	759 ¹ / ₄	-	-	-	-	Heavier

* No. 729 style sometimes called Grab Back.



GOLD EYEGLASS FRAMES

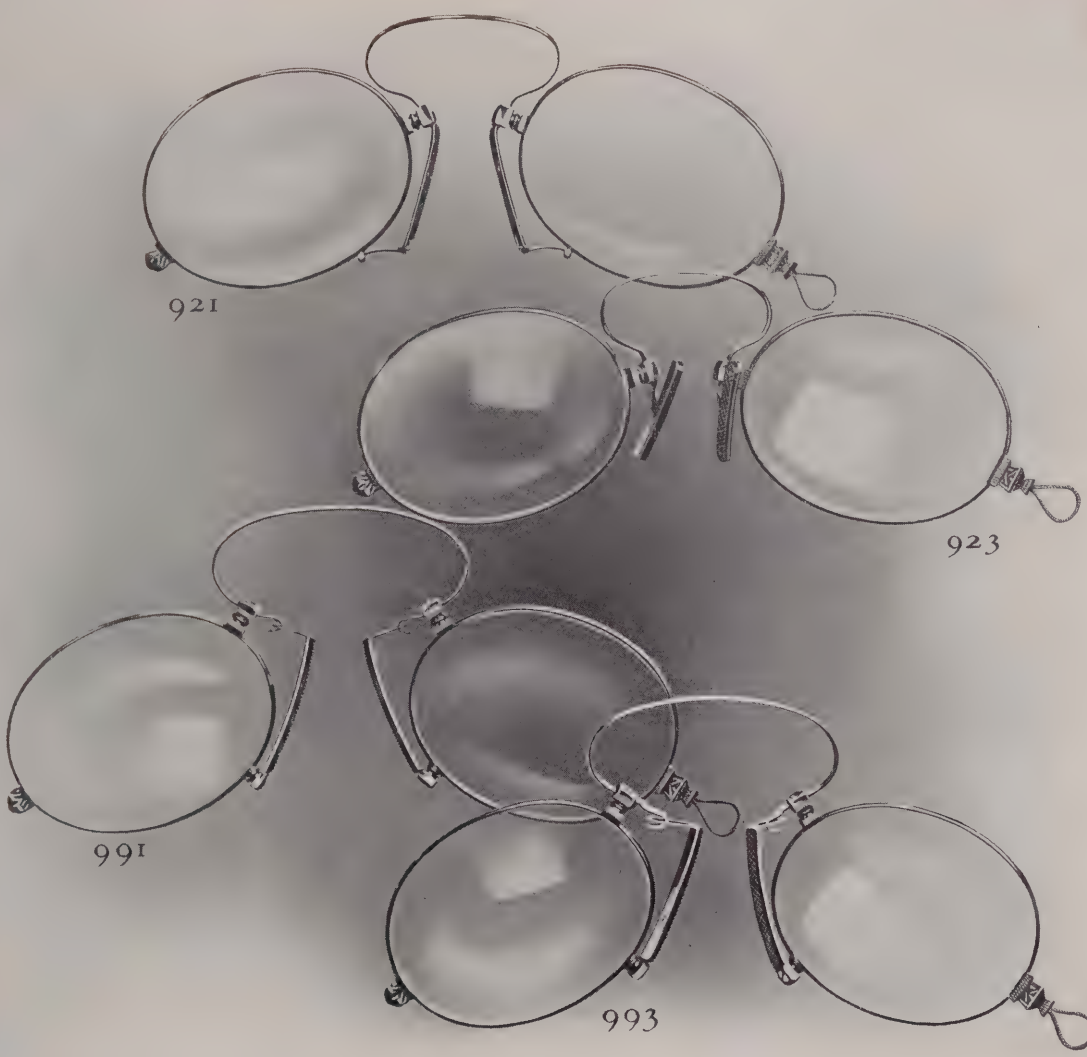
CATALOGUE NUMBER					DESCRIPTION				
Rigid		Adjustable		Canadian Pattern Adjustable					
901	-	981	-	866	-	-	-	-	Light
801	-	881	-	866 1/4	-	-	-	-	Medium
801 1/4	-	881 1/4	-	866 1/2	-	-	-	-	Heavy
801 1/2	-	881 1/2	-		-	-	-	-	Extra heavy
Offset C-1 Angle		Adjustable Offset		Canadian Pattern Adjustable Offset					
903	-	983	-	867	-	-	-	-	Light
803	-	883	-		-	-	-	-	Medium
803 1/4	-	883 1/4	-		-	-	-	-	Heavier
803 1/2	-	883 1/2	-	867 1/4	-	-	-	-	Heavy
	-		-	867 1/2	-	-	-	-	Extra heavy

Cork Guards supplied unless otherwise ordered.

Nos. 881, 883, etc., furnished with Solid Adjustable Guards (old No. 861 style) when so ordered. See Guards G-20 and G-21 Material Section.

No. 911 light weight frame, with Solid Zylonite Guards furnished when so ordered. See Guard G-25 Material Section.

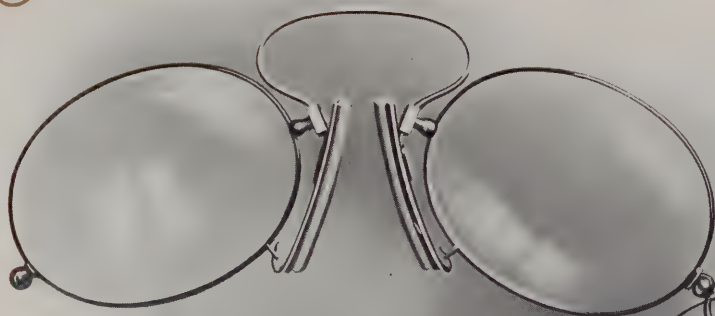
Nos. 866 and 867 etc. have bolstered Handles and Rounded Posts. See page 82 for illustrations of Canadian styles.



GOLD EYEGGLASS FRAMES

CATALOGUE NUMBER		DESCRIPTION									
Rigid		Adjustable		Extra Finish, Zylonite Guard, Countersunk Stud Screw							
921	-	991	-	-	-	-	-	-	-	-	Medium
921 1/4	-	991 1/4	-	-	-	-	-	-	-	-	Heavy
Offset C-1 Angle		Adjustable Offset									
923	-	993	-	-	-	-	-	-	-	-	Medium
923 1/4	-	993 1/4	-	-	-	-	-	-	-	-	Heavy

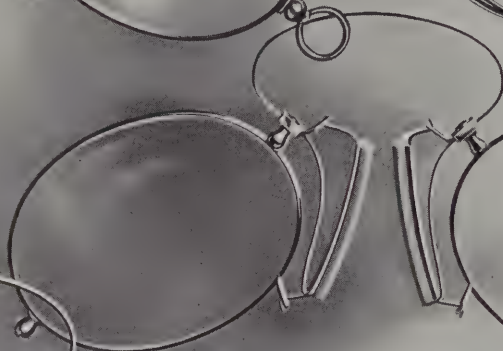
NOTE.—For styles of Eyeglass Guards other than regular, see Material Section.
Zylonite Guards supplied unless otherwise ordered.



862



999



873



871



998



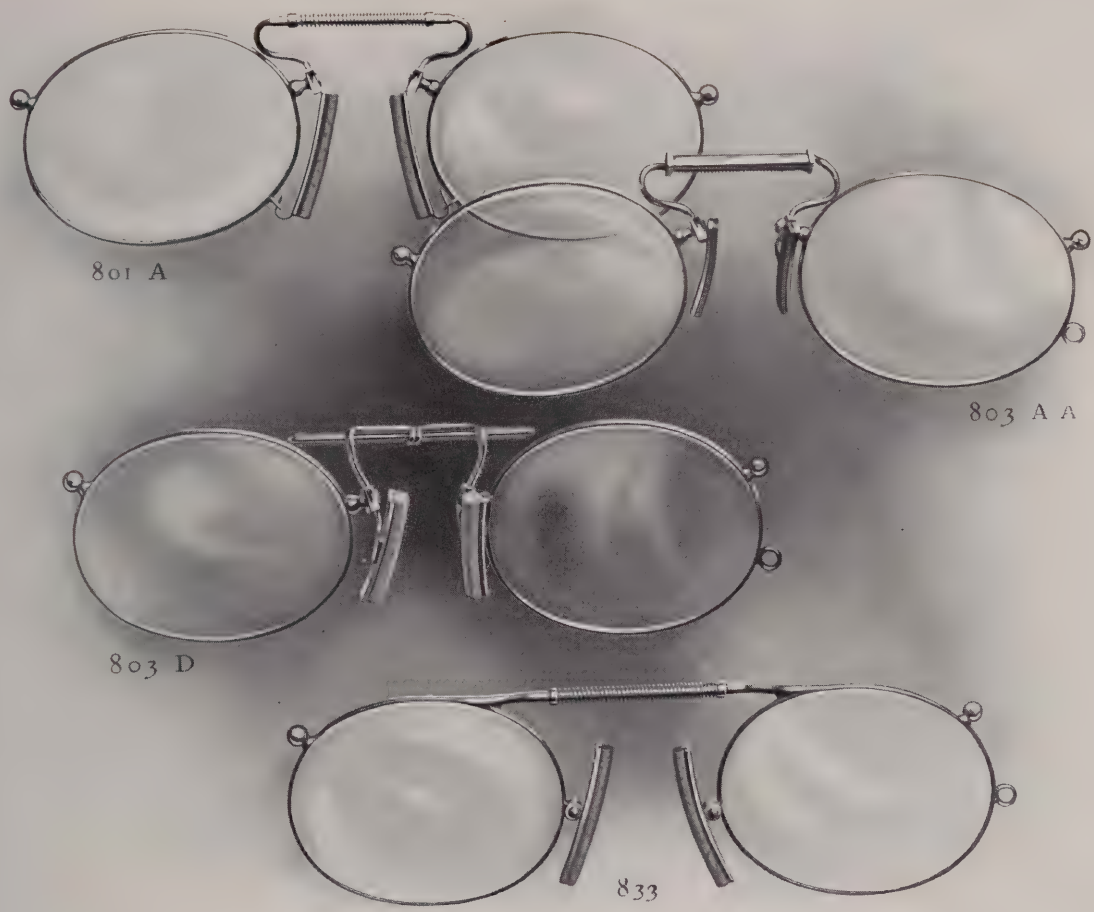
GOLD EYEGLASS FRAMES

CATALOGUE NUMBER		DESCRIPTION	
Long Offset	Double Adjustable	Double Adjustable Offset	Medium
862	871	873	

Cork Guards supplied unless otherwise ordered.

GOLD OXFORDS OR MONOCLES

CATALOGUE NUMBER		DESCRIPTION
Oxford	Gallery Oxford	Medium
998	999	



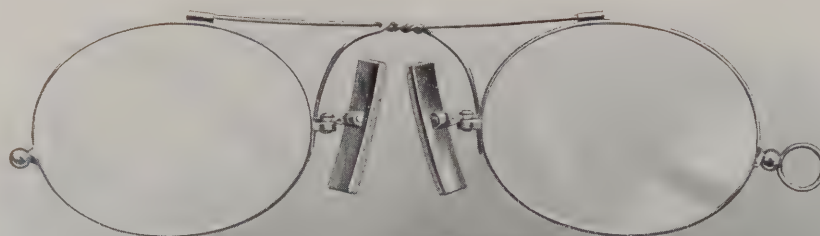
GOLD BAR SPRING EYEGLASS FRAMES

CATALOGUE NUMBER				DESCRIPTION	
"A"	"AA"	"D"	"F"	Ring for Cord, Medium Weight	
801 A	801 AA	801 D	801 F	-	Rigid
803 A	803 AA	803 D	803 F	-	Offset

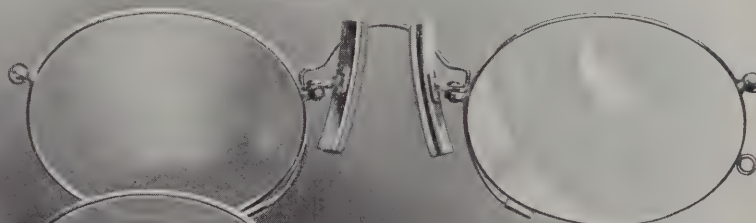
"Astig" or Rigid Bar Spring, Oval Eyewire, Rocking Offset Guard

Round Bar	Oval Bar	Triple Bar	
833	835	837	Medium
833 1/4	835 1/4	837 1/4	Heavy
833 1/2	835 1/2	837 1/2	Extra heavy

Cork Guards supplied unless otherwise ordered.
No. 833 style has Ring for Cord. No. 835 and No. 837 styles have small (19 H) loop Handle.



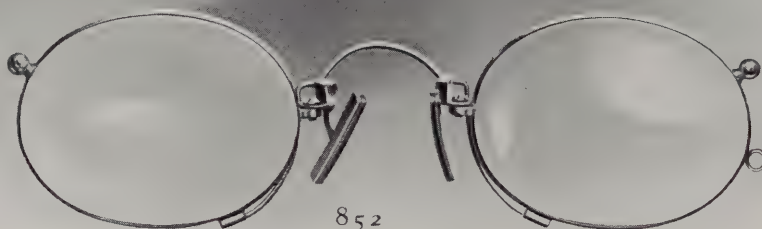
855 R



857 S



857 R

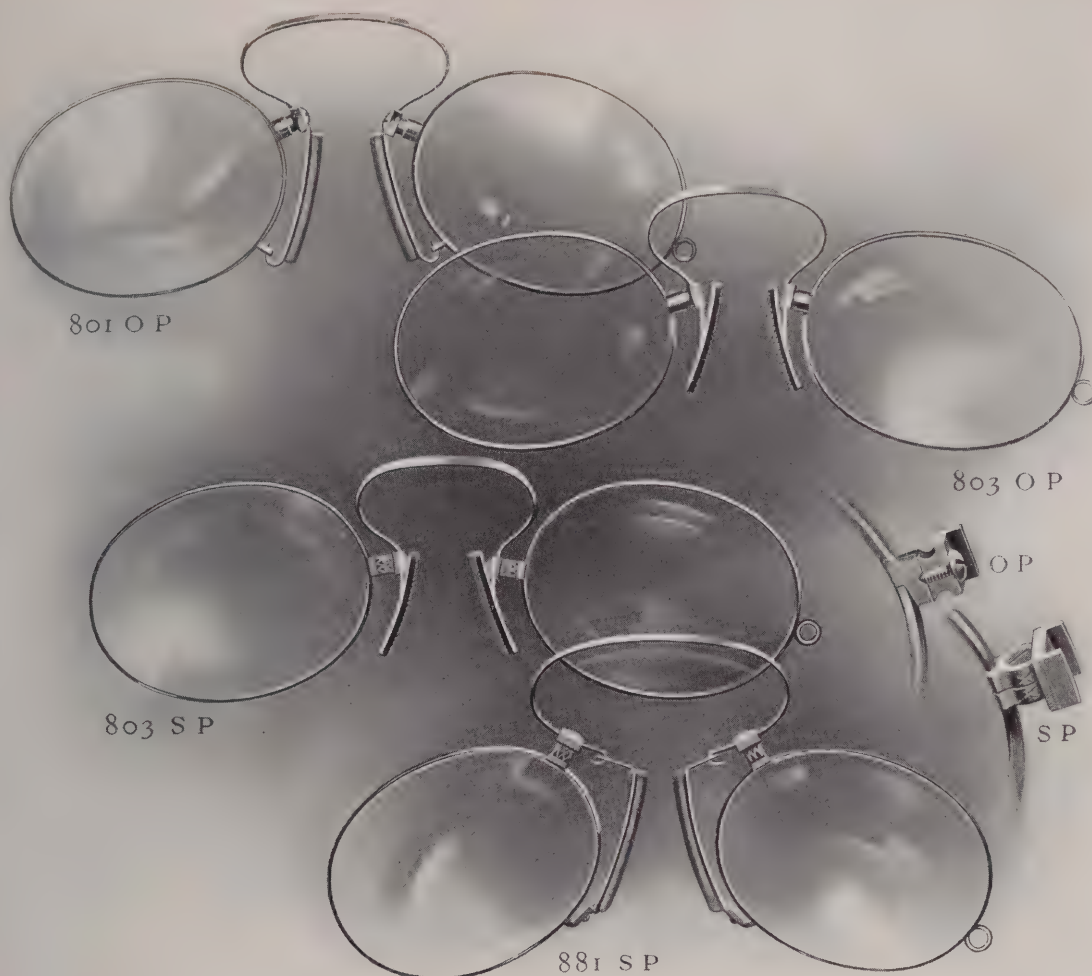


852

GOLD REVLUC EYEGLASS FRAMES

CATALOGUE NUMBER				DESCRIPTION
Interchangeable Offset	Rocking	Solid		
850	855 R	855 S	- - - -	Medium
851		-	- - - -	Medium
852	857 R	857 S	- - - -	Medium

No. 851 has Spring similar to No. 855 without Cross Bar
Cork Guards supplied unless otherwise ordered.



GOLD EYEGLASS FRAMES—OPEN POST

CATALOGUE NUMBER		DESCRIPTION
Round Post	Square Post	Ring for Cord
801 O.P.	801 S.P.	Rigid
803 O.P.	803 S.P.	Offset
881 O.P.	881 S.P.	Adjustable
883 O.P.	883 S.P.	Adjustable Offset

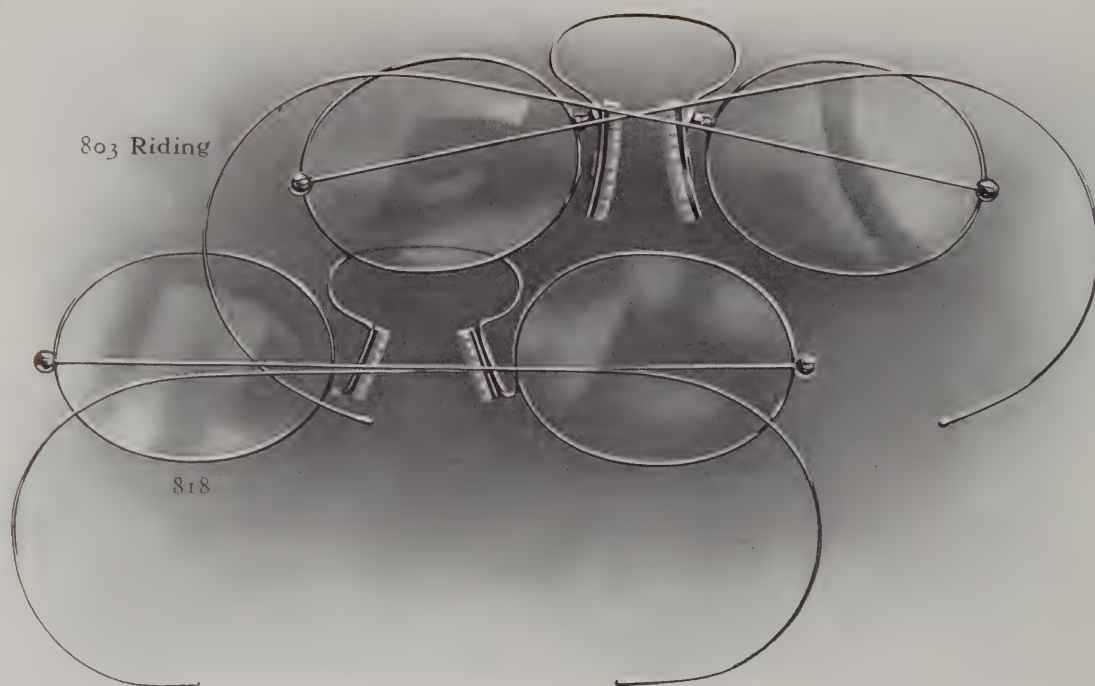
GOLD EYEGLASS FRAMES—GRAB TEMPLE

CATALOGUE NUMBER	DESCRIPTION
	Ring Handle, Medium Weight
801 G.T.	Rigid
803 G.T.	Offset
861 G.T.	Solid Adjustable
881 G.T.	Adjustable
883 G.T.	Adjustable Offset

See page 81 for illustrations of Grab Temple Eyeglass Frames.

Grab Temples on above Frames are regularly made with Zylonite Pads.

Cork Guards supplied unless otherwise ordered



GOLD COMBINATION FRAMES

CATALOGUE NUMBER

DESCRIPTION

Riding Temple			Cable Temple			Invisible End Piece, Solid Joint. Medium Weight		
801	Riding	- - -	801	C Riding	- - -	- - -	- - -	Rigid
803	Riding	- - -	803	C Riding	- - -	- - -	- - -	Offset
881	Riding	- - -	881	C Riding	- - -	- - -	- - -	Adjustable

Temples on above Frames same weight as No. 718, page 47.

GOLD SPECTACLETTE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Riding Temple			Cable Temple					
818	- - -	- - -	818 C	- - -	- - -	- - -	- - -	Medium

GOLD SPECTACLETTE EYEGLASS FRAMES

CATALOGUE NUMBER

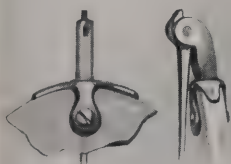
DESCRIPTION

834	-	Without Temples, Medium Weight
834	-	Spring Guard
	-	Adjustable Guard

Cork Guards supplied unless otherwise ordered.
For style of No. 839, see No. 1739, page 80.



792



792 & 798 °

798

799 1/2 C



799 1/2 C °

GOLD SPECTACLE MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

Straight Temple, "C" or "SS" Bridge

Rounded End Piece
Solid Joint
Round Temple

792 -
792 1/4 -

Rounded End Piece
Solid Joint
Half-round Temple

- - 793 - - - - - Light
- - 793 1/4 - - - - - Heavier

Riding Temple, "SS" Bridge

Rounded End Piece
Solid Joint

798 -
798 1/8 -
798 1/4 -
798 1/2 -
798 3/4 -

Rounded End Piece
Cap Joint

798.6 - - - -
798 1/8.6 - - - -
798 1/4.6 - - - -
798 1/2.6 - - - -
798 3/4.6 - - - -

Beveled End Piece
Solid Joint

799 - - - - - Light
799 1/8 - - - - - Medium
799 1/4 - - - - - Heavier
799 1/2 - - - - - Heavy
799 3/4 - - - - - Extra heavy bridge

Cable Temple, "SS" Bridge

Rounded End Piece
Solid Joint

799 1/2 C -
799 3/4 C -

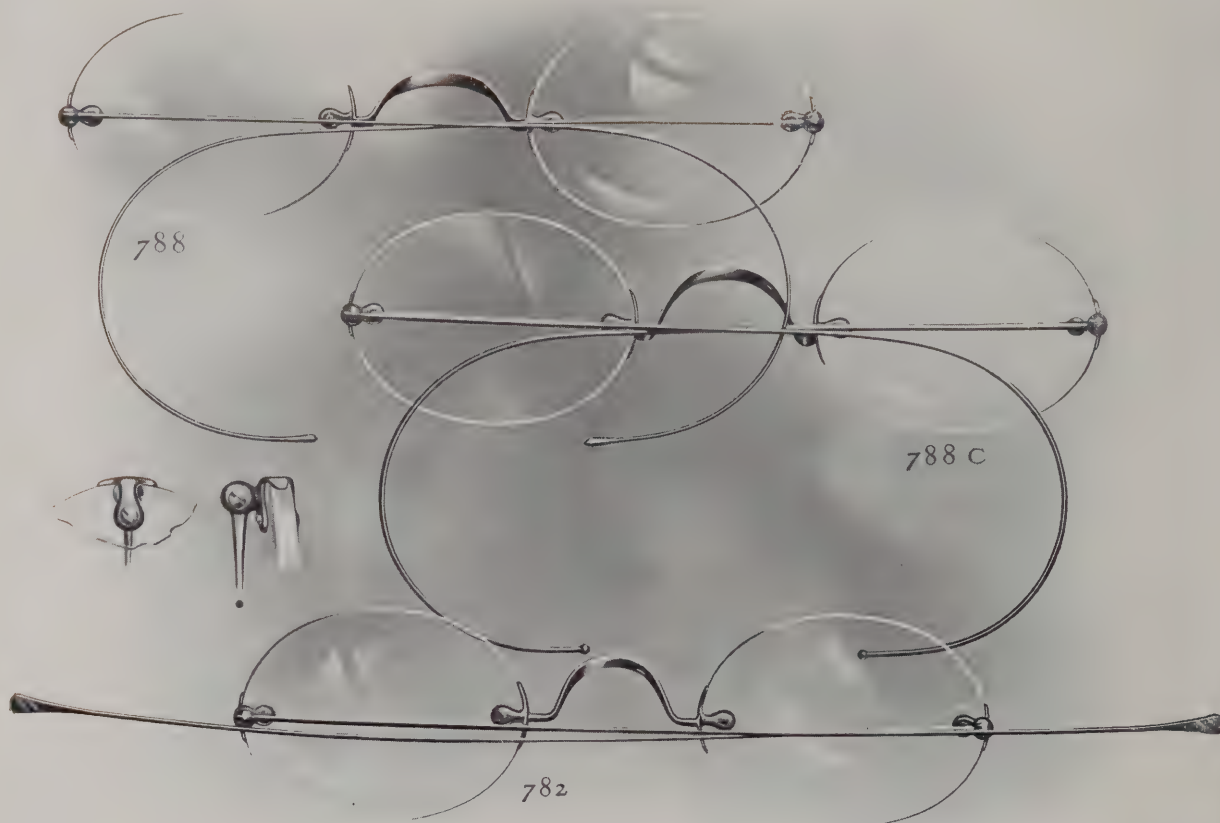
Rounded End Piece
Cap Joint

798 1/2.6 C - - -
798 3/4.6 C - - -

Beveled End Piece
Solid Joint

799 1/2 C - - - - - Heavy
799 3/4 C - - - - - Extra heavy bridge

No. 799 1/2 C same as old No. 799 3/4



GOLD SPECTACLE MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

Patented Invisible End Piece, Solid Joint

Straight Temple
RoundStraight Temple
Half-round

"C" or "SS" Bridge

782
782 1/4783
783 1/4Light
Heavier

Riding Temple

Cable Temple

"SS" Bridge

788

788 1/8

788 1/4

788 1/2

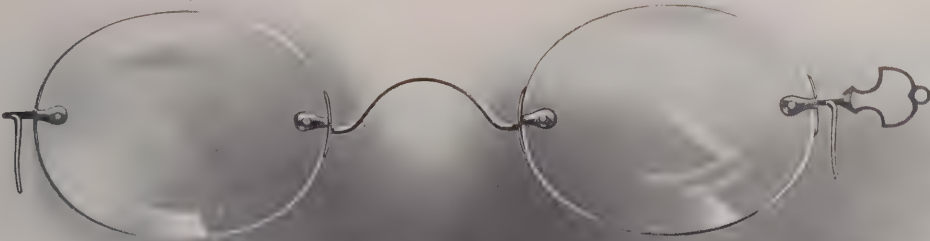
788 3/4

788 1/2 C

788 3/4 C

Light
Medium
Heavier
Heavy
Extra heavy bridge

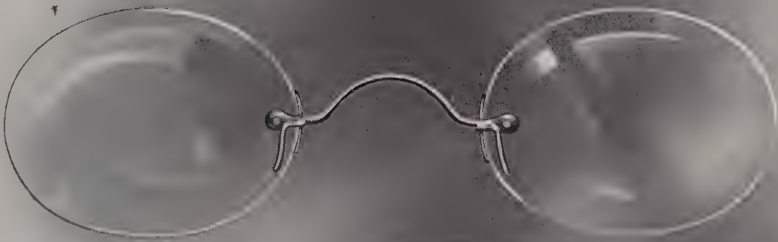
Above Riding Temples are same weight as No. 798; above Cable Temples are same weight as No. 798 1/2 C. See page 50.



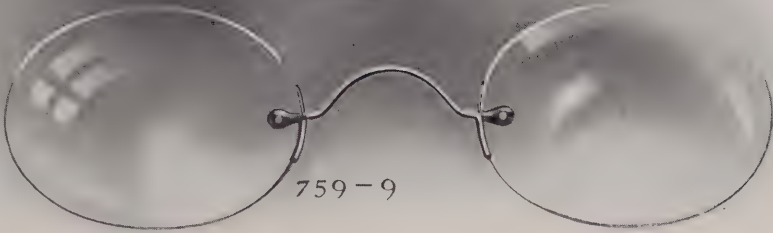
719-9



729-9



749-9



759-9

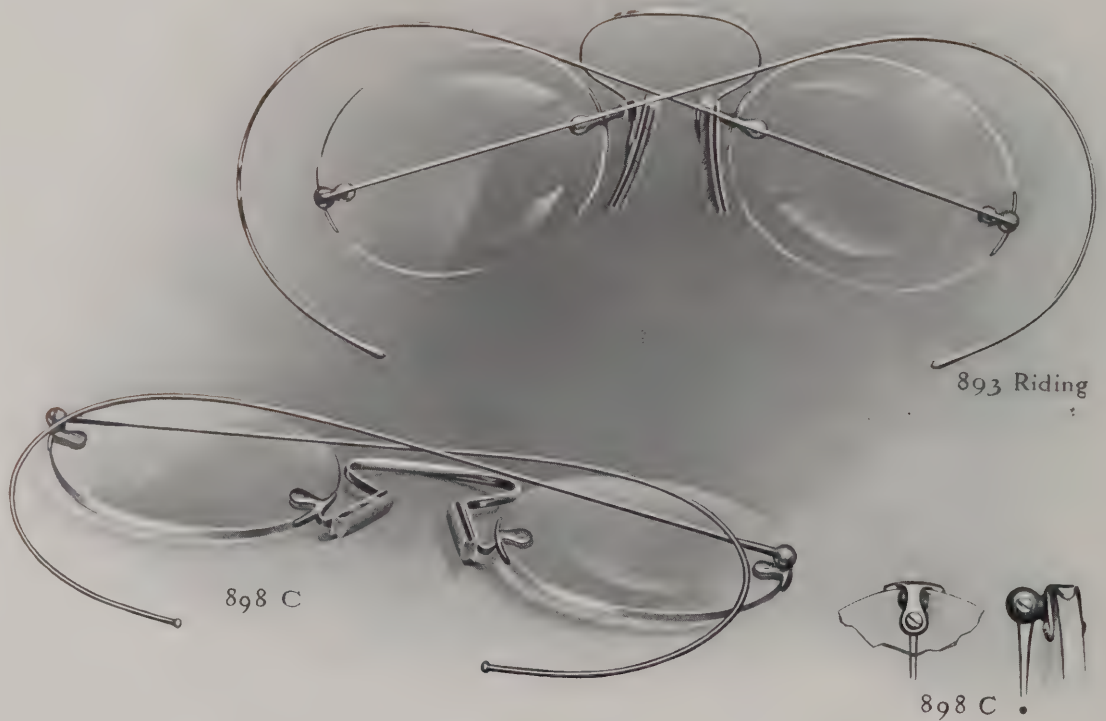
GOLD GRAB FRONT MOUNTINGS

CATALOGUE NUMBER		DESCRIPTION	
719.9	729.9	Oval Wire Bridge, with Handle and Hooks	
719 1/8.9	729 1/8.9	Medium	
		Heavier	

GOLD MEDIO GRAB FRONT MOUNTINGS.—PATENTED

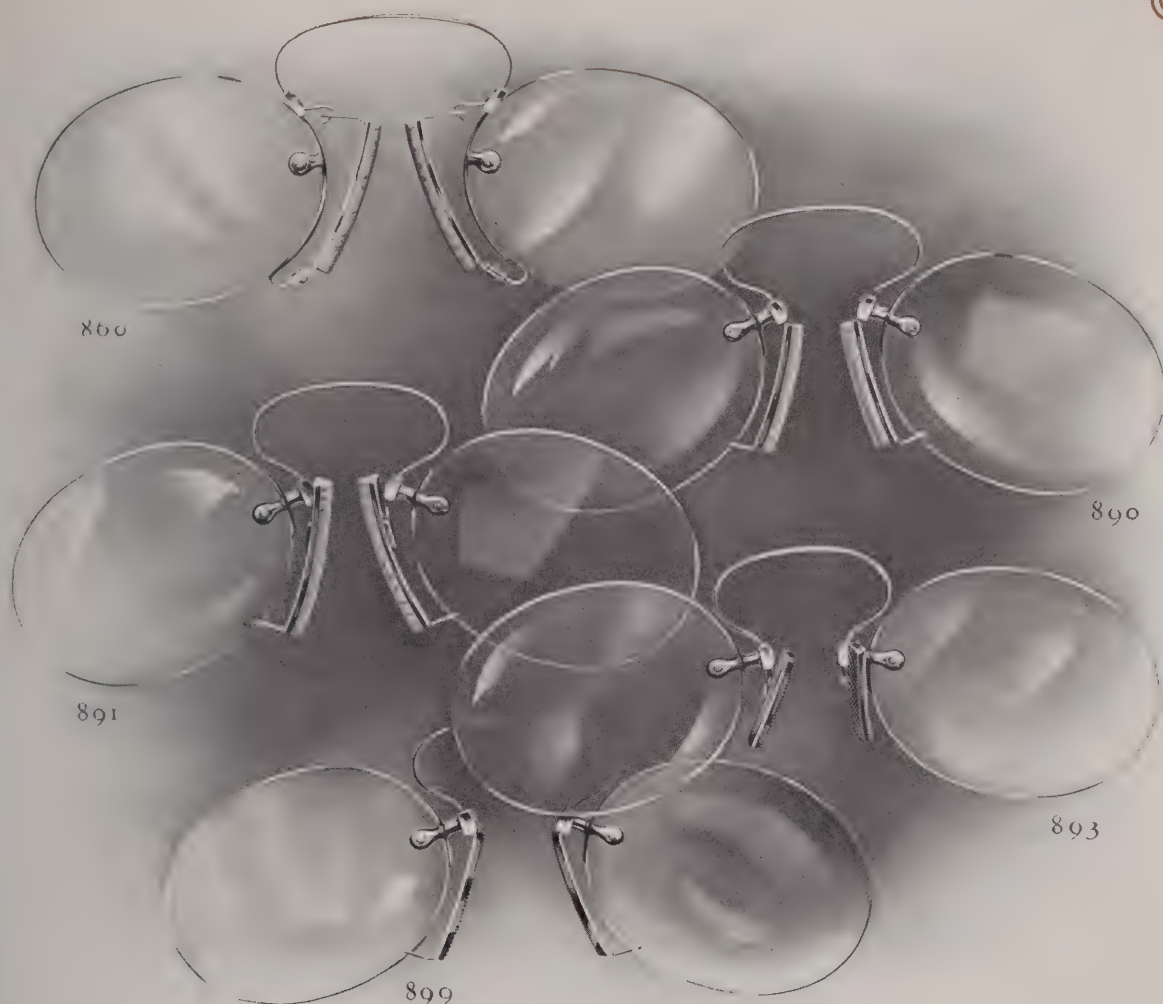
CATALOGUE NUMBER		DESCRIPTION	
For "SS" Bridge	For "C" Bridge	Round Wire Bridge, no Handle	
749.9	759.9	Medium	
749 1/8.9	759 1/8.9	Heavier	

No. 729.9 style sometimes called Grab Back.



GOLD COMBINATION AND SPECTACLETTE MOUNTINGS

Cork Guards supplied unless otherwise ordered.



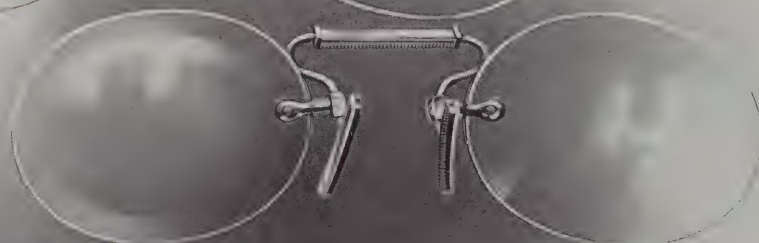
GOLD EYEGLASS MOUNTINGS

CATALOGUE NUMBER		DESCRIPTION
Adjustable	Adjustable Offset	
860 - - - - -	863 - - - - -	Medium
Rigid	Long Offset	
890 - - - - -	891 - - - - -	Medium
Offset		
993 Rimless - - - - -	- - - - -	Very light, sanitary, oval reduced Spring
893 - - - - -	- - - - -	Medium
894 - - - - -	- - - - -	Medium, for narrow P. D.
	Extra Finish	
Rigid		
899 - - - - -	- - - - -	Medium, Zylonite Guard, countersunk Stud Screw

No. 993 Rimless has riveted Guard Spring and Stud.
Cork Guards supplied unless otherwise ordered, except on Nos. 899 and 993.



893 A



893 A A



893 D



897

GOLD BAR SPRING EYEGLASS MOUNTINGS

CATALOGUE NUMBER				DESCRIPTION			
"A"		"AA"		"D"		"F"	
890 A	-	890 AA	-	890 D	-	890 F	-
893 A	-	893 AA	-	893 D	-	893 F	-
							Medium, Rigid Guard
							Medium, Offset Guard

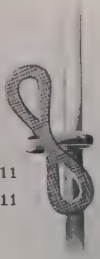
GOLD REVLUC EYEGLASS MOUNTINGS

CATALOGUE NUMBER				DESCRIPTION			
Interchangeable Offset		Rocking		Solid			
892 - - -		897 R - - -		897 S - - -			Medium

Cork Guards supplied unless otherwise ordered.



2811
2911



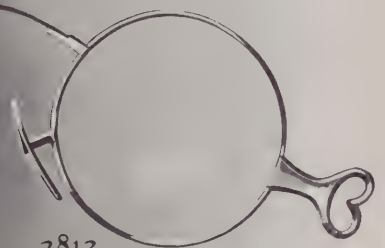
2811



2911



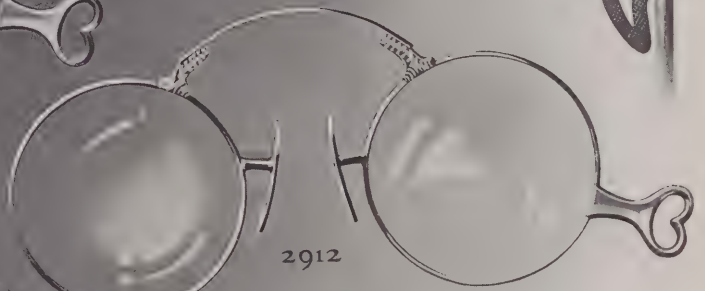
2812



2812
2912

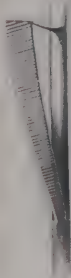


2823



2912

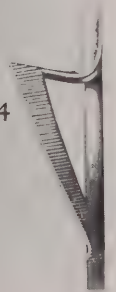
2823
2913



2913



2834



2834

GOLD AND SILVER "VARSITY" EYEGLASSES

Patent applied for. See description on following page



GOLD AND SILVER "VARSITY" EYEGLASS FRAMES

PATENT PENDING

A

CATALOGUE NUMBER

DESCRIPTION

Non-folding Styles *

Gold		Silver		
2811	-	3811	-	Plain Stud, AO-Loop Guard, 831 Style Spring
2812	-	3812	-	Plain Stud, Triangular Guard, 831 Style Spring
2823	-	3823	-	Plain Stud, Long Offset Guard, 881 Style Spring
2834	-	3834	-	Plain Stud, German Offset Guard, Hoop Spring
2911	-	3911	-	Engraved Stud, AO-Loop Guard, 831 Style Spring
2912	-	3912	-	Engraved Stud, Triangular Guard, 831 Style Spring
2913	-	3913	-	Engraved Stud, Long Offset Guard, 831 Style Spring

Folding Styles

2712	-	3712	-	Plain Stud, Triangular Guard, 831 Style Spring
2713	-	3713	-	Plain Stud, Long Offset Guard, 831 Style Spring

* For Non-folding Styles, see illustration on preceding page.

Gold "Varsity" Eyeglasses made in 10k and 14k.

Eye Sizes for above styles, 38, 40, and 42 mm. round. Size wanted must be stated in ordering.

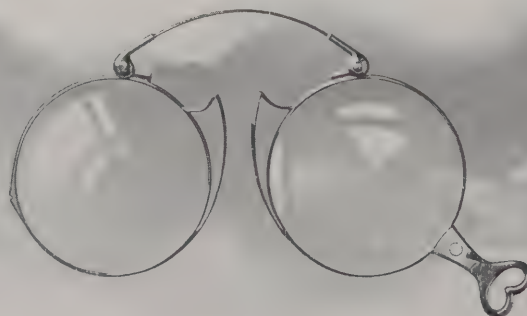
For other styles of "Varsity" Cases, see page 278.

For "Varsity" Ribbons, see page 298.

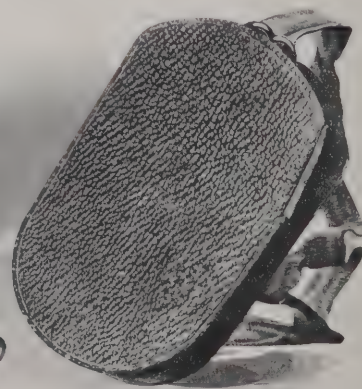
We also supply a form of the "Varsity" Frame in Gold-filled: No. 1773, having Round Eyes, Box Studs, Offset Guards, and Grecian Spring, similar to No. 831 style.



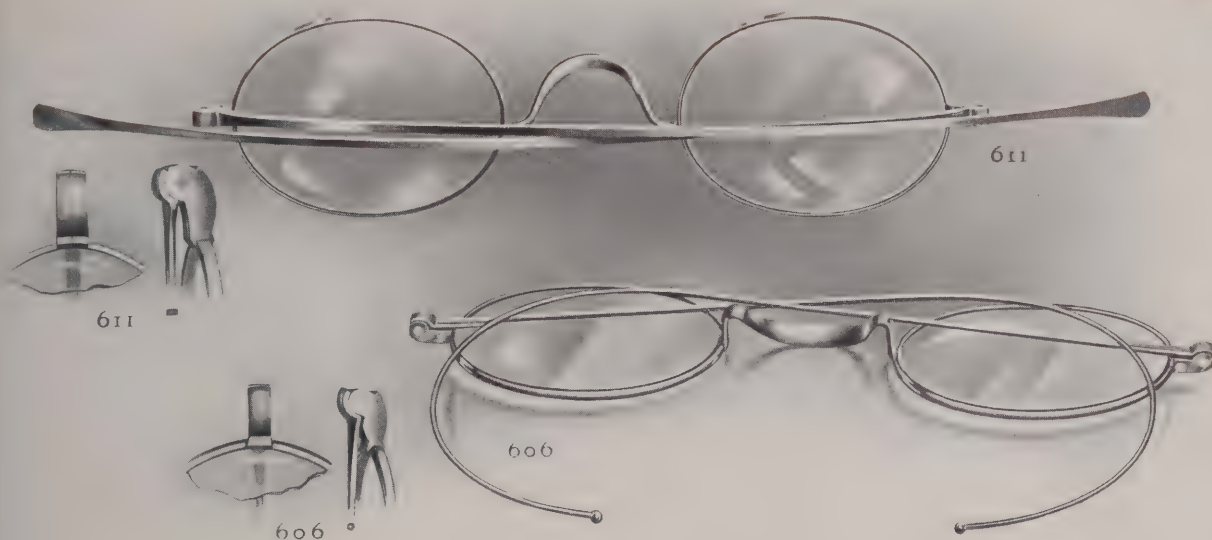
No. 2713 (Folded)



No. 2713 Varsity



No. 405 KC Case



SILVER SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Straight Temple, Rounded End Piece

Cap Joint											Flat Eyewire, Flat Temple
600	-	-	-	-	-	-	-	-	-	-	Light
610	-	-	-	-	-	-	-	-	-	-	Medium
620	-	-	-	-	-	-	-	-	-	-	Heavy
											Oval Eyewire, Flat Temple
601	-	-	-	-	-	-	-	-	-	-	Light
611	-	-	-	-	-	-	-	-	-	-	Medium
621	-	-	-	-	-	-	-	-	-	-	Heavy
											Oval Eyewire, Loop Slide Temple
631	-	-	-	-	-	-	-	-	-	-	Medium
631 1/2	-	-	-	-	-	-	-	-	-	-	Heavy
											Oval Eyewire, Band Slide Temple
641	-	-	-	-	-	-	-	-	-	-	Medium
641 1/2	-	-	-	-	-	-	-	-	-	-	Heavy

Riding Temple, Rounded End Piece

Cap Joint											Solid Joint	Oval Eyewire
606	-	-	-	-	-	-	-	-	-	-	608	Light
616	-	-	-	-	-	-	-	-	-	-	618	Medium
626	-	-	-	-	-	-	-	-	-	-	628	Heavy

Cable Temple, Rounded End Piece

606 C	-	-	-	-	-	-	-	-	-	-	608 C	Light
616 C	-	-	-	-	-	-	-	-	-	-	618 C	Medium
626 C	-	-	-	-	-	-	-	-	-	-	628 C	Heavy

SILVER SPECTACLE MOUNTINGS

CATALOGUE NUMBER

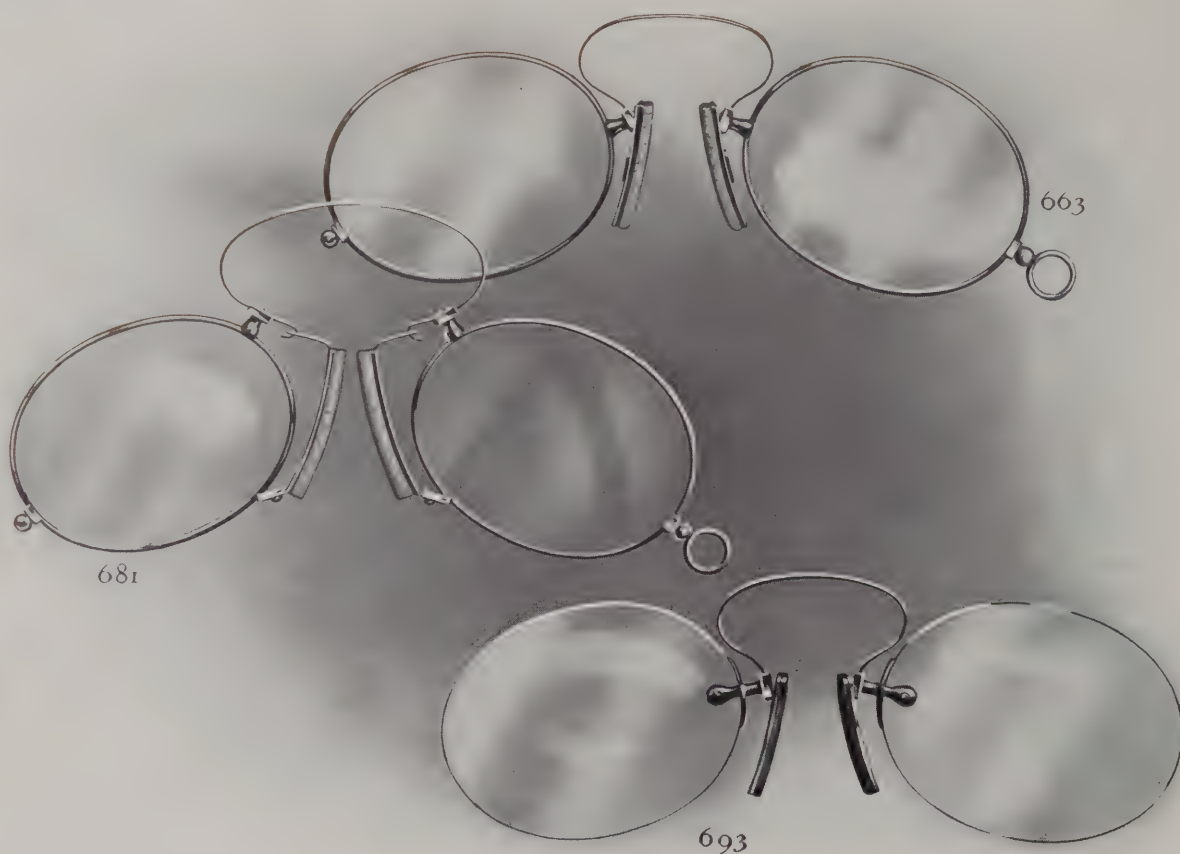
DESCRIPTION

Riding Temple, Rounded End Piece

Solid Joint											
608	-	-	-	-	-	-	-	-	-	-	Medium

Cable Temple, Rounded End Piece

608 C	-	-	-	-	-	-	-	-	-	-	Medium
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SILVER EYEGLOSS FRAMES

CATALOGUE NUMBER

DESCRIPTION

661

Medium Weight

663

Rigid

681

Offset

683

Adjustable

Adjustable Offset

SILVER EYEGLOSS MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

690

Medium Weight

693

Rigid

Offset

Cork Guards supplied unless otherwise ordered.

GOLD-FILLED SPECTACLES AND EYEGLASSES





GOLD-FILLED SPECTACLES AND EYEGLASSES

Gold-filled Stock Gold-filled frames and mountings, as their name indicates, are made from stock with an outer covering of gold, and a filling, or core, of other metal. They differ materially from the electro-plated article, which is produced by the action of electricity on gold, held in solution, thus forming a deposit upon the frame. On gold-filled goods, the gold shell surrounding the core is an actual sheet of gold, forming a seamless tube, of a thickness gauged according to the quality desired, which is regulated by weight. In order to produce $\frac{1}{10}$ 12 karat gold-filled stock, it would be necessary to combine one part of gold 12 karat fine with nine parts of other metal in the above described manner.

Electro-plating presents a poor wearing surface as it is only practical to deposit the gold upon the frame to a limited thickness, while the exposed portion of gold-filled stock, is, as stated, an actual shell of gold with a variable thickness, according to the quality demanded.

One-tenth Quality Stock While there is no recognized standard of quality, the one-tenth grade of gold-filled stock has generally been accepted as possessing the necessary thickness to insure reasonable wear, and, for this reason, the custom originated of placing a tag on this quality, guaranteeing the frame to wear a specified term of years. Competition, coupled with a demand for a cheaper article, soon had the effect, in many instances, of gradually reducing the quality of stock, and at the same time of extending the length of the guarantee beyond reasonable limits.

Guarantee Tags, Stamping This condition presented a difficulty which guarantee tags, so easily changed, could not overcome, and led to the adoption by us, some years since, of a system of stamping similar to that previously used on solid gold goods of our manufacture, that is, a trade mark denoting quality stamped in the metal itself. The favorable reception which was given to this new departure demonstrated its utility and strengthened our purpose to establish a standard on gold-filled productions, the same as we had already done on gold, where our trade marks are a recognized guarantee of quality wherever AOCo goods are purchased.

Manufacture of Stock To insure this end, and to know that the quality was as indicated, we determined to manufacture the stock itself, for, although we upheld the standard and protected our customers by frequent assays, we had heretofore been compelled to depend upon the integrity and reliability of the wire manufacturer, while, as a producer of the stock itself, we would be in a position to know and certify to its quality by stamping the metal.

Comparison of Stock It is essential, in drawing a comparison of style, finish and durability between two makes of gold-filled frames, that the same grade of stock be selected in both cases, as it is manifestly unfair to compare the $\frac{3}{16}$ quality of one maker with the $\frac{1}{16}$ grade of another. While it is our province, as manufacturers, to supply the demand for the lower grades of gold-filled stock, we cannot too strongly recommend the better ones, as we believe the dealer who handles the better qualities in gold-filled goods, will, in the end, attain the greater measure of success.

Patented Styles Certain methods of construction and machinery used in the manufacture of gold-filled frames have been developed, or acquired by the American Optical Company and protected by letters patent. These improvements are embodied particularly in what we term our Patented Styles, which will be found listed on pages 74, 75 and 87. These goods have a characteristic stiffness, color and design which make



Truing Spectacle Frames



A Corner of Polishing Room

them especially desirable for use by the better class of trade. The Patented Styles are distinguished by the 1000 series of catalogue numbers. We recommend these goods as representing the highest type of development in the manufacture of gold-filled spectacle frames and mountings. The Patented Styles are not made in any quality below $\frac{1}{10}$ 10 karat. Every frame and mounting is marked in the bridge in accordance with the registered trade marks as explained on the following page.

Gold Bridges Any style of gold-filled spectacle frames or mountings made with solid gold bridge when desired. In ordering, specify the number denoting style, weight and karat sign indicating quality, thus, 1638 \square 1 eye with 716 $\frac{1}{4}$ 10 karat bridge.

Gold Temples may be had on any gold-filled spectacle frames and mountings having solid joints. Specify karat and style number, to indicate quality and weight.

Pear Tip Temples Special attention is directed to the improved AOCo pear tip construction for riding temples. By the employment of special patented machinery we are able to cover the entire tip with an even gold coating, doing away with the usual soldering process, thus retaining the temper and wear-resisting properties with no tendency to corrode or discolor. Regularly furnished on Patented Style frames and mountings of $\frac{1}{10}$ 12 karat quality, or better.

Plated End Pieces may be had on $\odot \square$ and $\odot \square$ quality gold-filled spectacle frames and mountings. Add the letter "P" to catalogue number when ordering, thus, 1558 P \square .

Gold End Pieces, as regularly furnished, are 8 karat, and may be had on any style gold-filled spectacle frames or mountings. Add the letter "G" to the catalogue number when ordering, thus, 1638 G. Ten karat end pieces are furnished when ordered.

Solderless Cable Temples (pat.)

This construction has gained great favor, as it overcomes the objections to the soldered form of cable temple construction. It is usually supplied with flat butt, see Material Section, a desirable feature in cable temples. Can be supplied in any quality.



Shaping and Sizing
Spectacle Eyes

Special Temples Whenever half-cable temples are desired add "H" to cable temple number, thus, 1699 HC.

Whenever comfort cable temples are desired add "C" to cable temple number, thus, 1628 CC. See page 75. For other special temples, see Material Section.

Material All styles in temples, guards, springs, studs, etc., are listed in detail in the Material Section of this catalogue. For various forms and assortments of bridges and standard sizes of eyes, see Introductory Section.

In ordering it is necessary to follow the catalogue number denoting the style, with the quality mark indicating the grade of stock, thus, 1638 \oplus , meaning 1638 style, $\frac{1}{10}$ 12 karat gold-filled stock.

AOCO Registered Trade Marks for Gold-filled Goods Gold-filled goods, as regularly made by us, are stamped on under side of spring or crest of bridge, with the following registered trade marks:

REGULAR STYLES

$\frac{1}{10}$ 10 karat \oplus \square	10 karat gold-filled with
$\frac{1}{20}$ 10 karat \oplus \square	$\frac{1}{10}$ 10 karat Bridge
$\frac{1}{30}$ 10 karat \oplus \square	and Temple \oplus \boxtimes

PATENTED STYLES

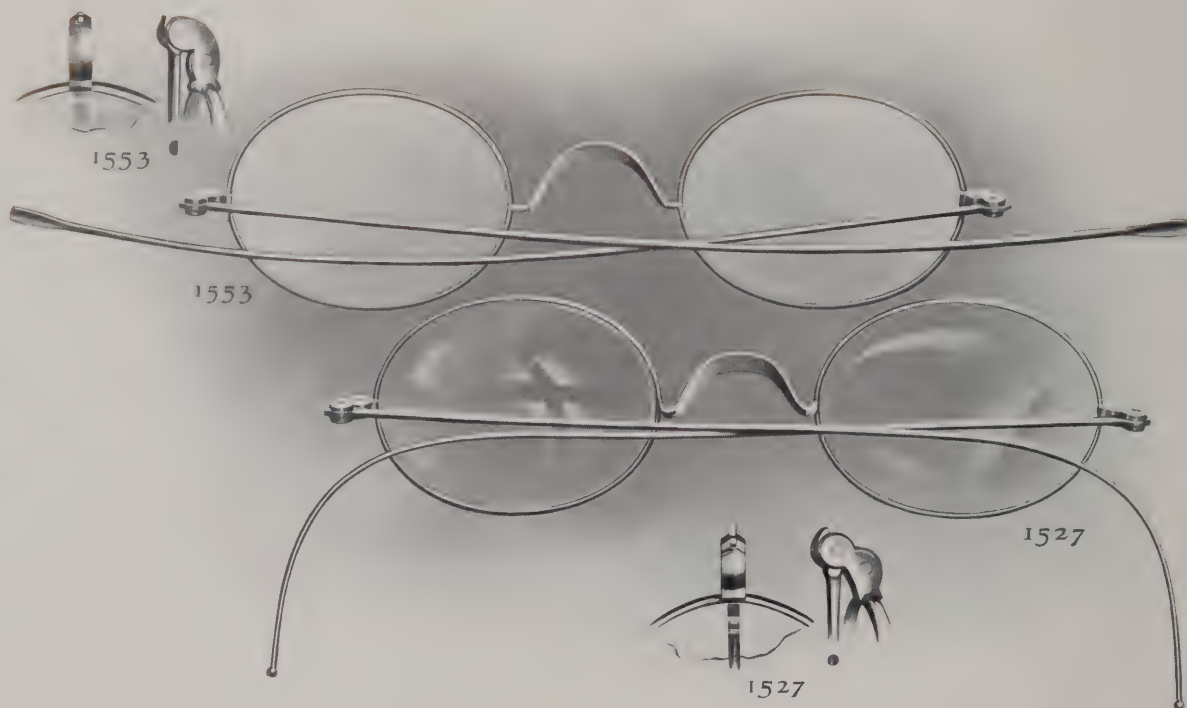
$\frac{1}{10}$ 10 karat \oplus \sim \square	$\frac{1}{8}$ 14 karat \oplus \sim \square
$\frac{1}{10}$ 12 karat \oplus \sim \oplus	$\frac{1}{10}$ 14 karat \oplus \sim \square
$\frac{1}{10}$ 12 karat gold-filled with $\frac{1}{8}$ 12 karat Bridge and Temple \oplus \sim \square	
12 karat gold-filled with $\frac{1}{10}$ 12 karat Bridge and Temple \oplus \sim ∇	

Styles such as bar spring frames and mountings, Revluc frames and mountings, Grab Temple frames and Patented Style frames and mountings are not made in the lowest grade of stock.

AOCO Stock Complete stocks of staple styles and qualities are carried at all times. Lists of goods carried in AOCO stock will be furnished upon application.



View of Polishing Room

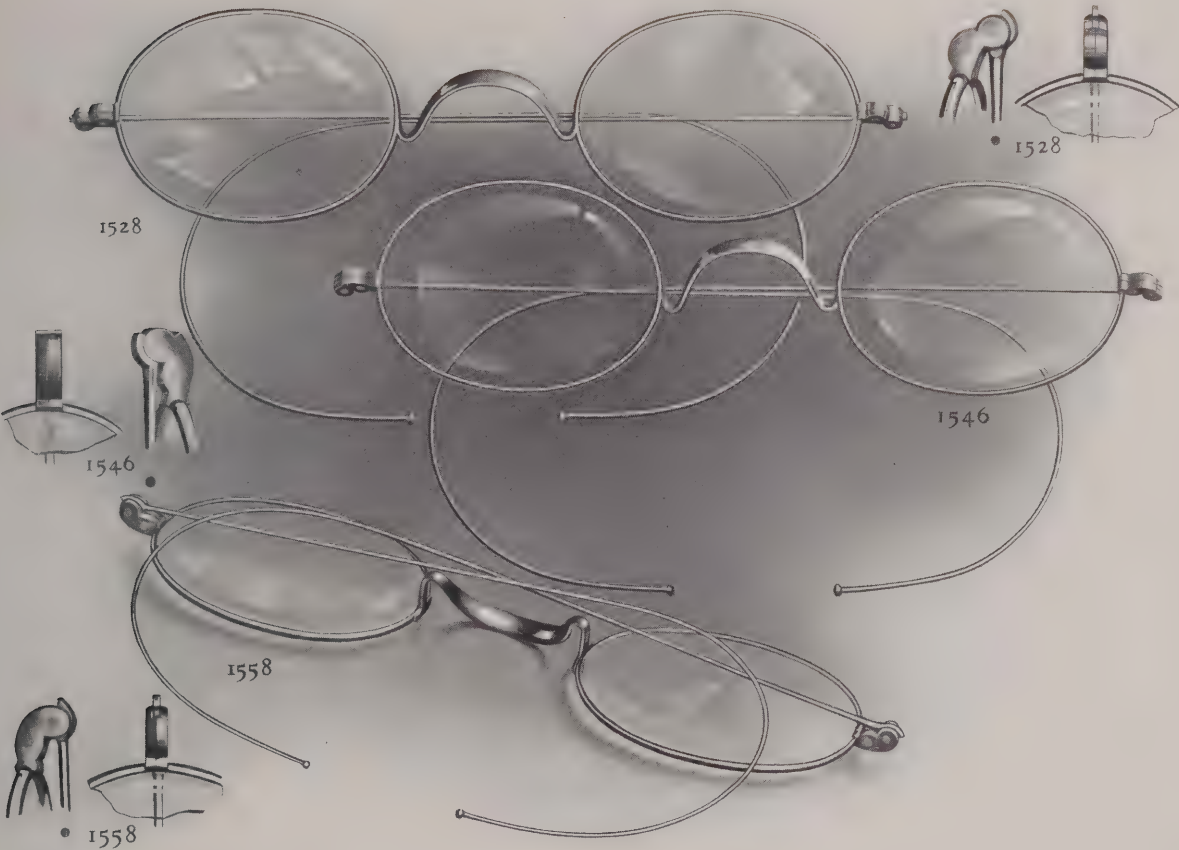


GOLD-FILLED SPECTACLE FRAMES

CATALOGUE NUMBER						DESCRIPTION	
Straight Temple							
Beveled Short End Piece Solid Joint		Beveled End Piece Swaged Cap Joint		Beveled End Piece Solid Joint			
1520 - - -		1540 - - -		1550 - - -		Medium, Flat eyewire, Flat temple	
1521 - - -		1541 - - -		1551 - - -		Medium, Flat temple	
1523 - - -		1543 - - -		1553 - - -		Medium, Half-round temple	
1523 1/2 - - -		1543 1/2 - - -		1553 1/2 - - -		Heavy, Half-round temple	
Half-riding Temple							
1527 - - -		1547 - - -		1557 - - -		Medium, Round-butt temple	
1527 1/2 - - -		1547 1/2 - - -		1557 1/2 - - -		Heavy, Round-butt temple	

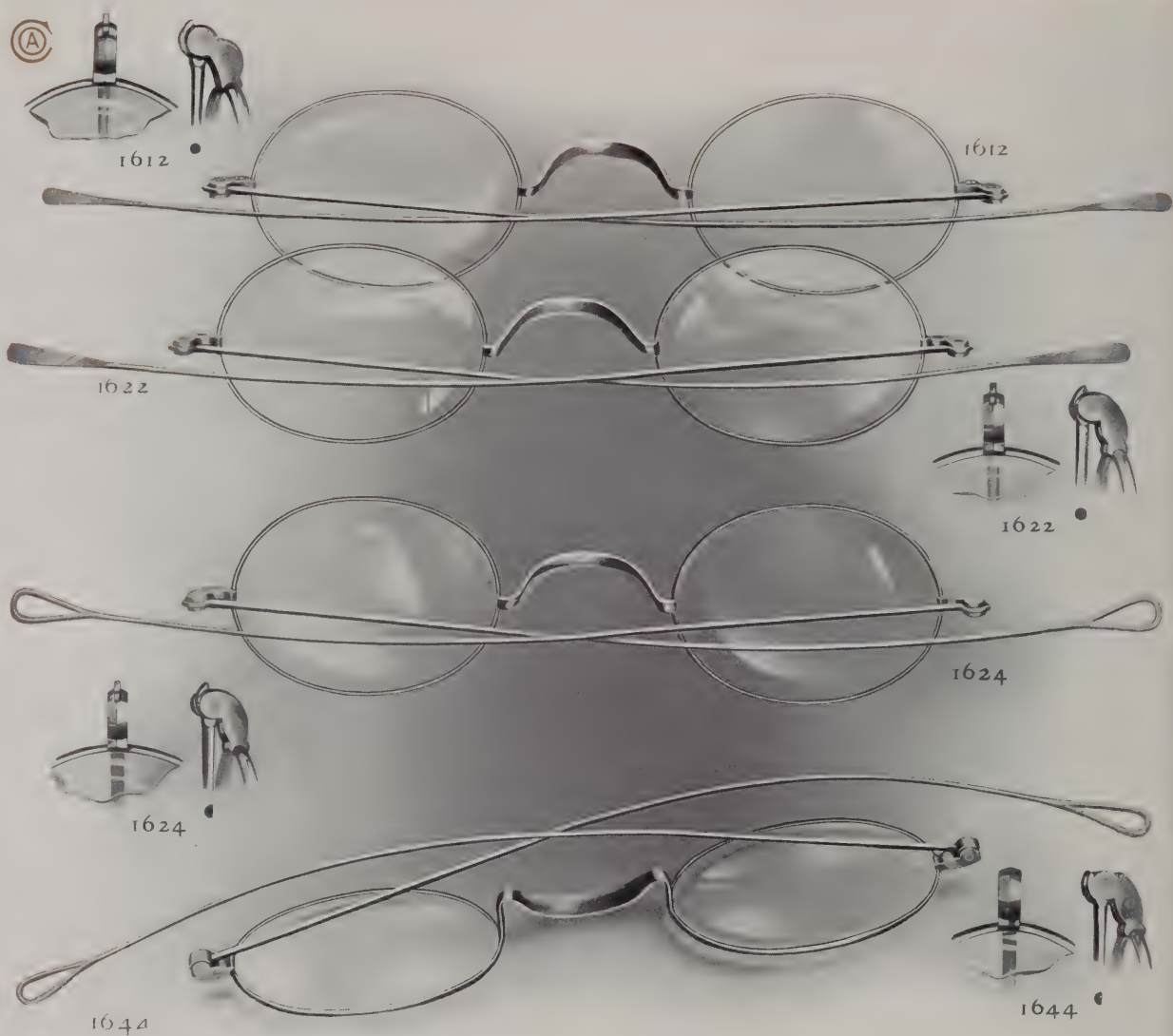
Above Half-riding Temple Frames supplied with "C" or "SS" Bridges.

All Gold-filled Spectacle and Eyeglass Frames have oval eyewire, except Nos. 1520, 1540 and 1550.



GOLD-FILLED SPECTACLE FRAMES

CATALOGUE NUMBER										DESCRIPTION		
Riding Temple												
Beveled Short End Piece				Beveled End Piece				Beveled End Piece				
Solid Joint				Swaged Cap Joint				Solid Joint				
1528	-	-	-	1546	-	-	-	1558	-	-	-	Medium
1528½	-	-	-	1546½	-	-	-	1558½	-	-	-	Heavy
Cable Temple												
1528 C	-	-	-	1546 C	-	-	-	1558 C	-	-	-	Medium
1528½ C	-	-	-	1546½ C	-	-	-	1558½ C	-	-	-	Heavy



GOLD-FILLED SPECTACLE FRAMES. — PATENTED STYLES

CATALOGUE NUMBER

DESCRIPTION

Straight Temple

Beveled Short End Piece
Solid JointBeveled End Piece
Solid JointBeveled End Piece
Swaged Cap Joint

Extra Finish. Medium Weight

1612 - - -
1613 - - -
1614 - - -1622 - - -
1623 - - -
1624 - - -1642 - - -
1643 - - -
1644 - - -Round, flat tip
Half-round, spoon tip
Half-round, open tip
Half-round, open tip, English end piece
Round, flat tip, flush bridge
Half-round, spoon tip, flush bridge

1632-9 - - -

1632 - - -
1633 - - -1644-21 - - -
1632-6 - - -
- - -

Half-riding Temple

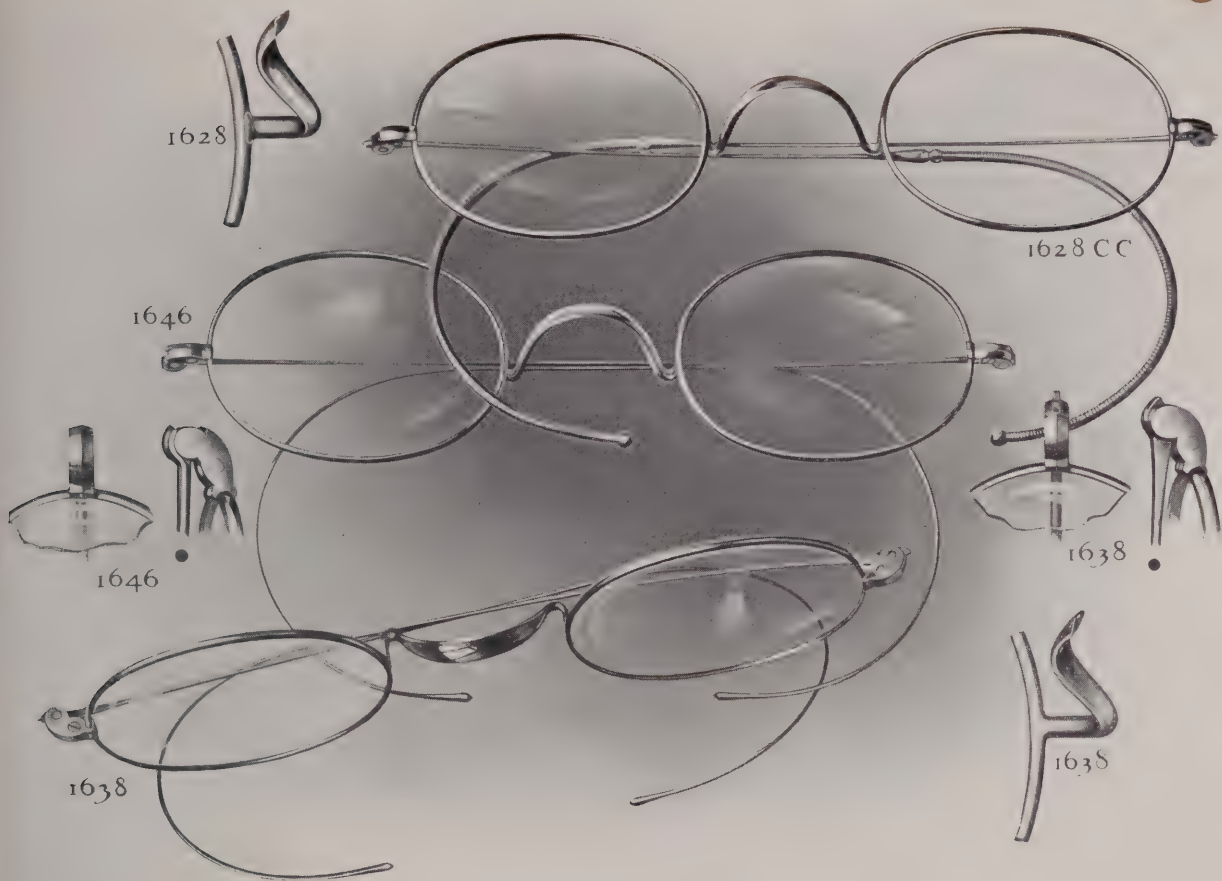
1617 - - -

1627 - - -
1637 - - -- - -
- - -
- - -Round butt
Flat butt, flush bridge

Specify whether "C" or "SS" Bridges are wanted in ordering.

Round Temple Frames supplied with open tip when so ordered.

No. 21 style End Piece can be supplied on any of the above frames having Swaged Cap Joint.



GOLD-FILLED SPECTACLE FRAMES.—PATENTED STYLES

CATALOGUE NUMBER

DESCRIPTION

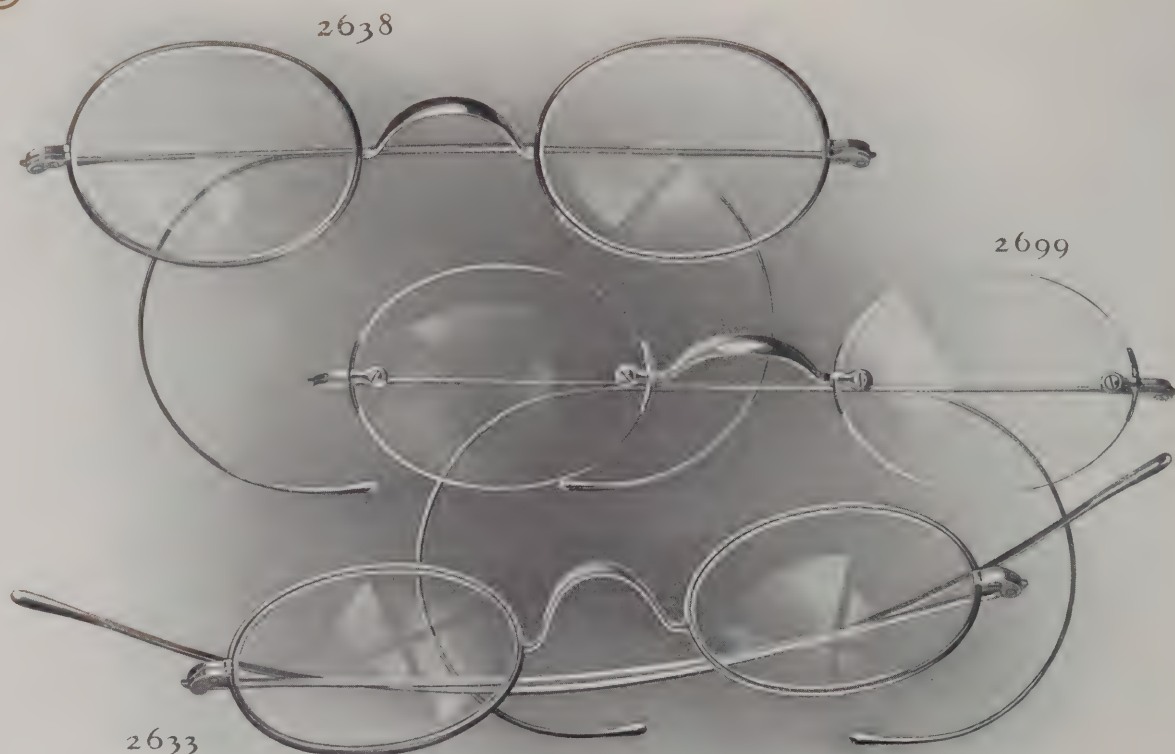
Riding Temple

Beveled Short End Piece Solid Joint	Beveled End Piece Solid Joint	Beveled End Piece Swaged Cap Joint	Extra Finish
1618 - - - -	1628 - - - -	1636 - - - -	Medium
1618 ½ - - - -	1628 ½ - - - -	1636 ½ - - - -	Heavy
	1638 - - - -	1646 - - - -	Medium
		1646 ¼ - - - -	Heavier
	1638 ½ - - - -	1646 ½ - - - -	Heavy
		1646-21 - - - -	Medium

Cable Temple

1618 C - - - -	1628 C - - - -	1636 C - - - -	Medium
1618 ½ C - - - -	1628 ½ C - - - -	1636 ½ C - - - -	Heavy
	1638 C - - - -	1646 C - - - -	Medium
		1646 ¼ C - - - -	Heavier
	1638 ½ C - - - -	1646 ½ C - - - -	Heavy
		1646-21 C - - - -	Medium

Nos. 1618, 1628 and 1638 styles have flat-butt Temples. Nos. 1638 and 1646 have flush Bridge.
 Pear Tip Temples regularly supplied on all above Riding Temple Frames.
 Comfort Cable (CC) supplied on any above styles; when so ordered, add CC to catalogue number.
 No. 21 style End Piece can be supplied on any above Frames having Swaged Cap Joint.



SPECIAL GOLD-FILLED SPECTACLE FRAMES AND MOUNTINGS

FRAMES	CATALOGUE NUMBER				MOUNTINGS	DESCRIPTION
Straight Temple	Half riding Temple	Riding Temple	Cable Temple	Riding Temple	Cable Temple	Beveled End Piece, Solid Joint, Medium Weight
2553	2557	2558	2558 C	2599	2599 C	Regular construction
2633	2637	2638	2638 C	2699	2699 C	Patented construction

Nos. 2638 and 2699 have Pear Tip flat-butt Temples.

Nos. 2633, 2557 and 2637 regularly supplied with "SS" Bridges.

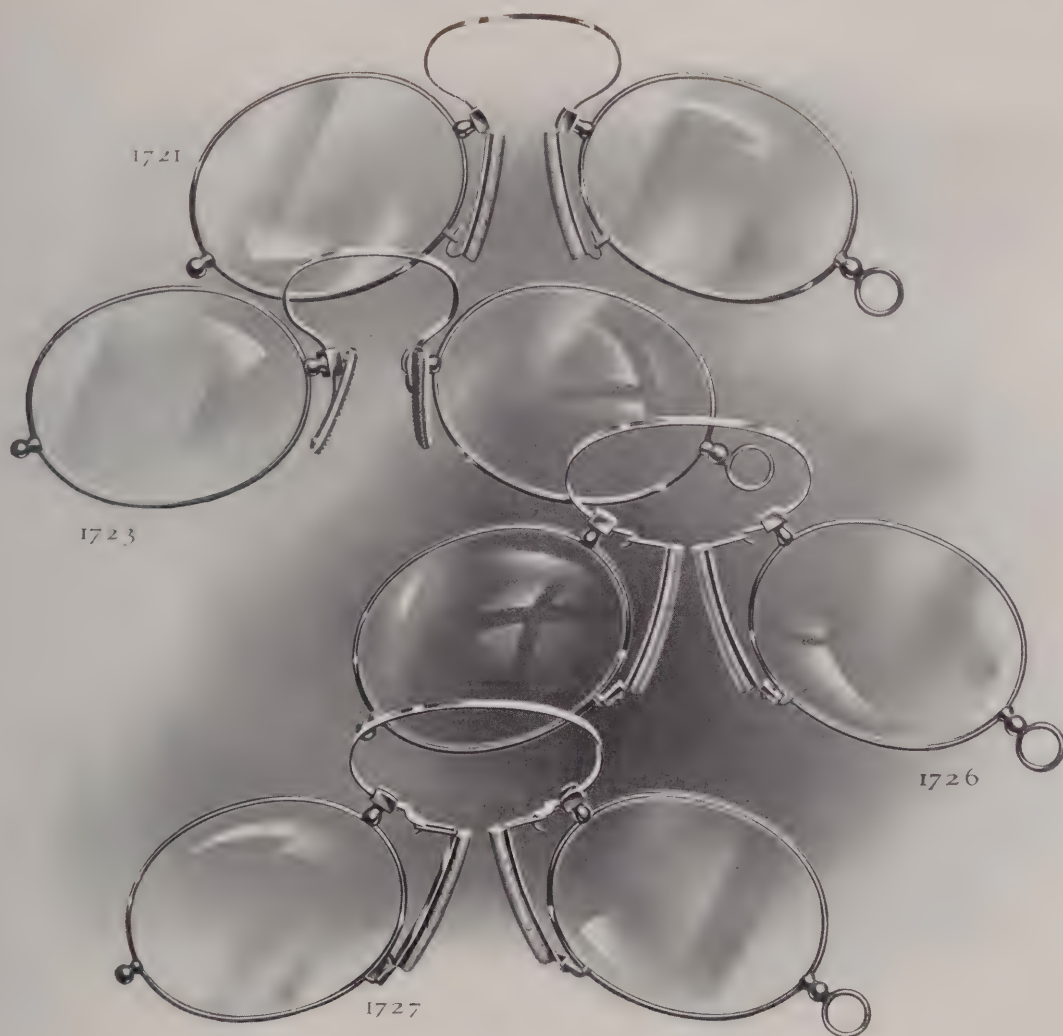
Above goods in 2500 series made only with 10 karat Bridge and Temples.

Above goods in 2600 series made only in patented construction with 12 karat Bridge and Temples.

SPECIAL GOLD-FILLED SPECTACLE FRAMES AND MOUNTINGS

FRAMES	CATALOGUE NUMBER				MOUNTINGS	DESCRIPTION
Straight Temple	Half riding Temple	Riding Temple	Cable Temple	Riding Temple	Cable Temple	Beveled End Piece, Solid Joint, Medium Weight, Made in 10 karat Gold-filled only
3553	3557	3558	3558 C	3599	3599 C	Regular construction

No. 3557 supplied with "SS" Bridge.



GOLD-FILLED EYEGLASS FRAMES

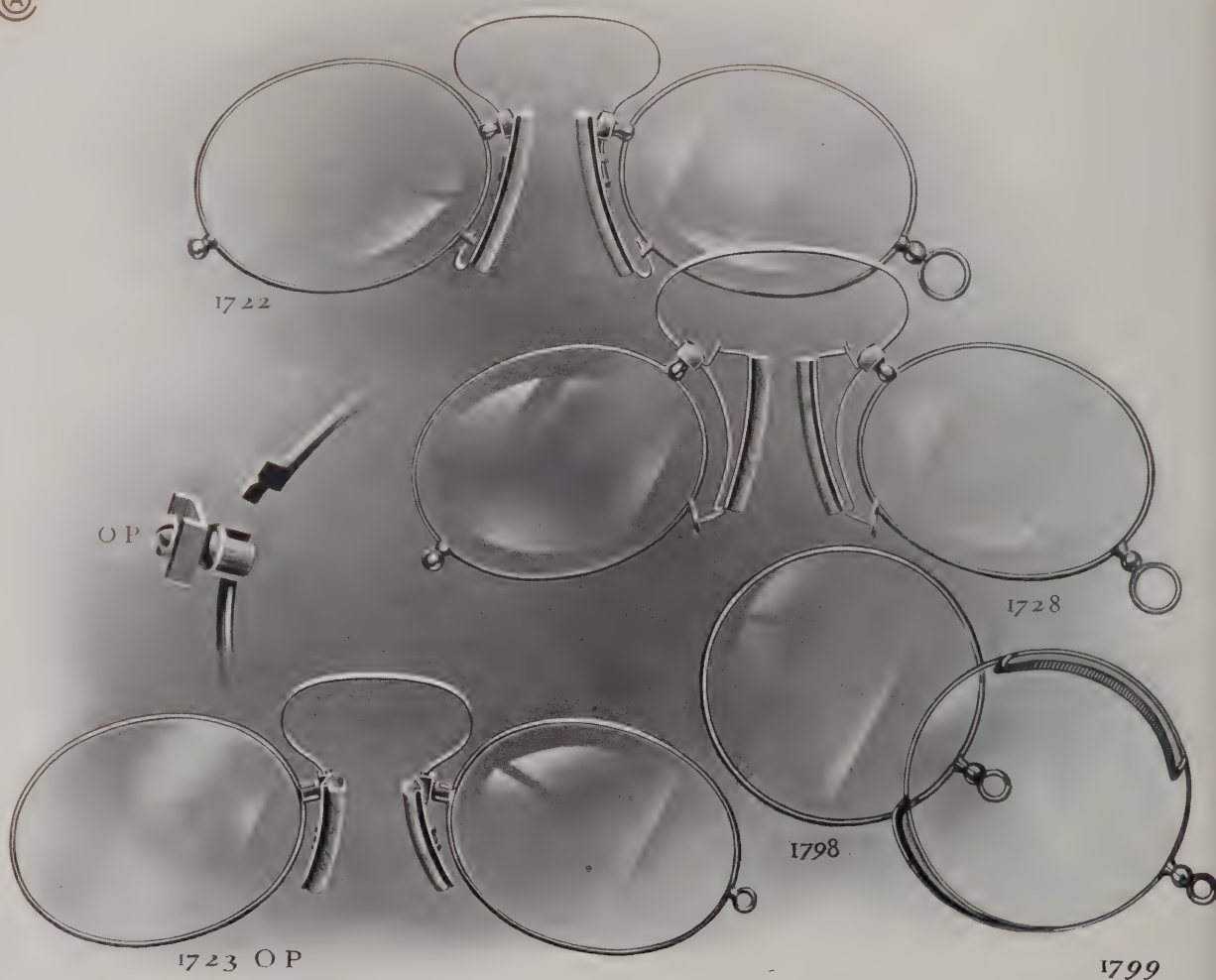
CATALOGUE NUMBER

DESCRIPTION

1721
1723
1726
1727
1728

Ball Ring Handle, Medium Weight
- - - Rigid
Offset
Adjustable
Adjustable Offset

Catch and Catch Pin supplied only when so ordered.
Eyeglasses made with Cork Guards unless otherwise ordered.



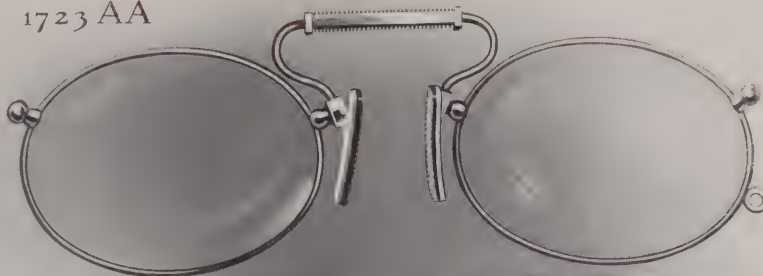
GOLD-FILLED EYEGLASS FRAMES

Cork Guards supplied unless otherwise ordered.

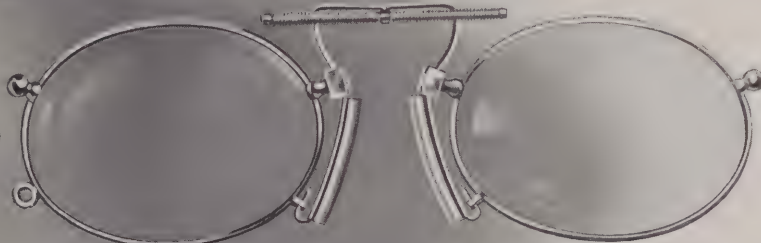
GOLD-FILLED OXFORDS OR MONOCLES



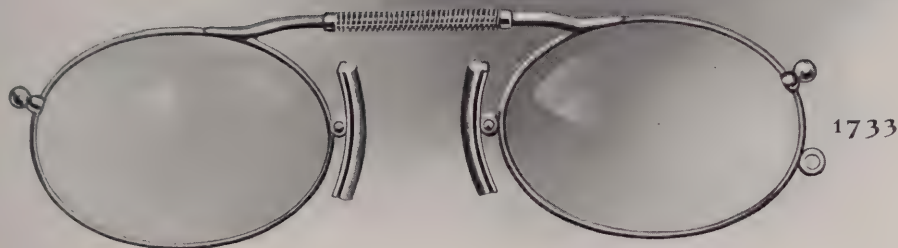
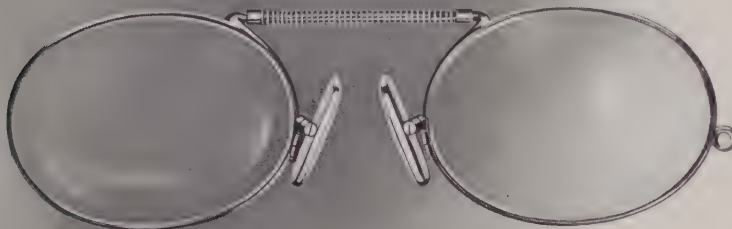
1723 AA



1721 D



1735 L

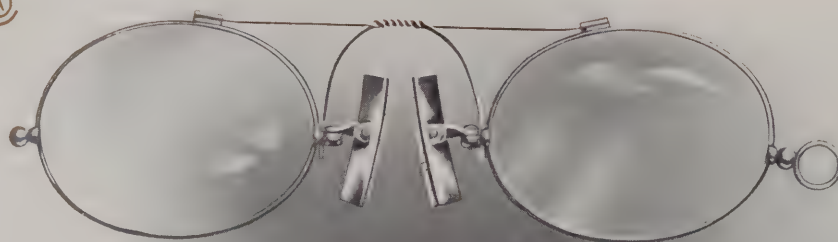


1733

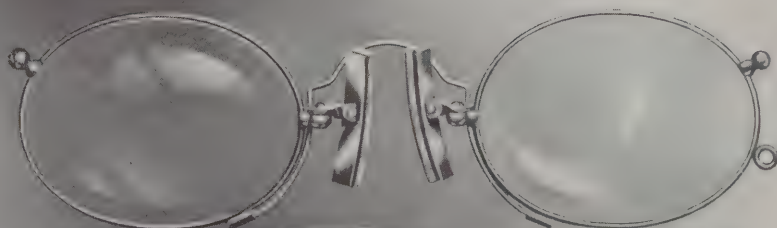
GOLD-FILLED BAR SPRING EYEGGLASS FRAMES

CATALOGUE NUMBER										DESCRIPTION																					
"AA"				"D"				"F"				Ring for Cord, Medium Weight																			
1721 AA				-	-	-	1721 D				-	-	-	1721 F				-	-	-	-	-	Rigid								
1723 AA				-	-	-	1723 D				-	-	-	1723 F				-	-	-	-	-	Offset								
1726 AA				-	-	-	1726 D				-	-	-	1726 F				-	-	-	-	-	Adjustable								
"Astig" or Rigid Bar Spring, Rocking Offset Guards																															
Round Bar						Oval Bar						Flat Bar						Triple Bar													
						1735 L						-	-	-	-	-	-	-	-	-	-	-	Light								
1733						-	-	-	1735						-	-	-	1736						-	-	-	1737	-	-	-	Medium

©



1755 R



1757 R



1752



1739

GOLD-FILLED REVLUC EYEGLASS FRAMES

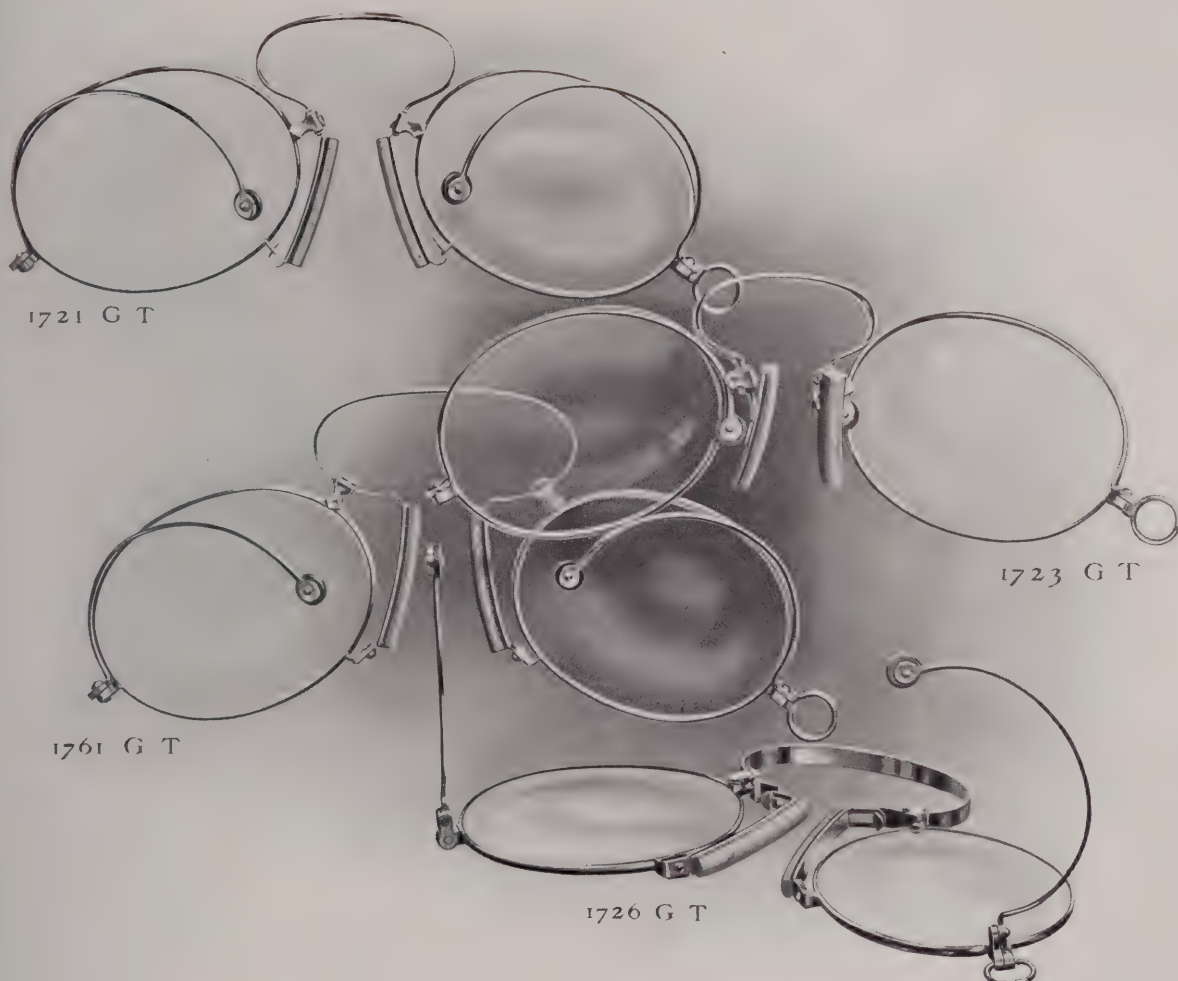
CATALOGUE NUMBER				DESCRIPTION				
Interchangeable Offset		Rocking		Solid				
1750	-	-	1755 R	-	1755 S	-	-	Medium
1751	-	-	-	-	-	-	-	Medium
1752	-	-	1757 R	-	1757 S	-	-	Medium

GOLD-FILLED SPECTACLETTE EYEGLASS FRAMES

CATALOGUE NUMBER				DESCRIPTION				
1734	-	-	-	-	-	-	-	Oval Wire Bridge, Medium Weight
1739	-	-	-	-	-	-	-	Ball Pear Handle, Spring Guard
								Ball Ring Handle, Adjustable Guard

Cork Guards supplied unless otherwise ordered.

No. 1751 has Spring similar to No. 1755 without Cross Bar.



GOLD-FILLED EYEGGLASS FRAMES—GRAB TEMPLE

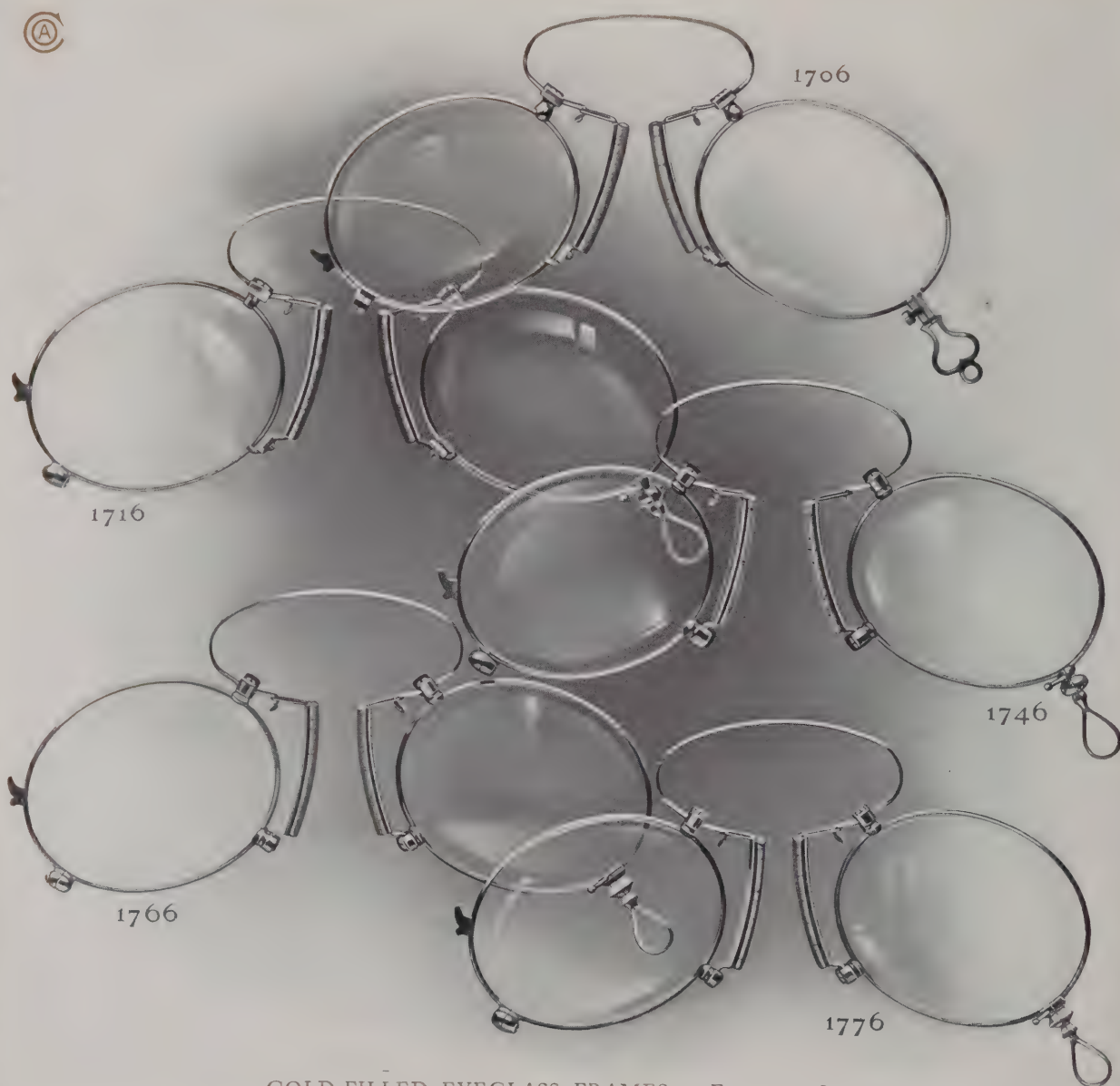
CATALOGUE NUMBER

DESCRIPTION

1721 G.T.
1723 G.T.
1726 G.T.
1727 G.T.
1761 G.T.

Ring Handle, Medium Weight
Rigid
Offset
Adjustable
Adjustable Offset
Solid Adjustable

Temples on above Frames regularly made with Zylonite pads.
Cork Guards supplied unless otherwise ordered.



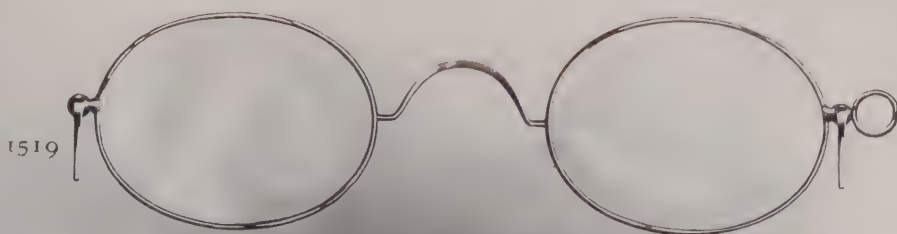
GOLD-FILLED EYEGLASS FRAMES. — EUROPEAN STYLES

CATALOGUE NUMBER			DESCRIPTION
Fancy Handle Plated Joints	Large Ball Pear Handle	Ball Pear Handle Rounded Posts	
1706	1711	1741	Japanese Pattern, Rigid
1707	1716	1746	Canadian Pattern, Adjustable
	1717	1747	Canadian Pattern, Adjustable Offset
		Bolstered Handle	
Rounded Posts	Capped Post Screws		
1766	1771		Canadian Pattern, Rigid
1767	1776		Canadian Pattern, Adjustable
	1777		Canadian Pattern, Adjustable Offset

Nos. 1711 and 1741 regularly supplied with tied Springs 70 mm. long: all other styles have Springs 63 mm. long. Longer Springs supplied when so ordered.

Cork Guards supplied unless otherwise ordered.

All above styles regularly supplied with Catch and Pin.



1529



1539

1549 MEDIO

GOLD-FILLED GRAB FRONT FRAMES

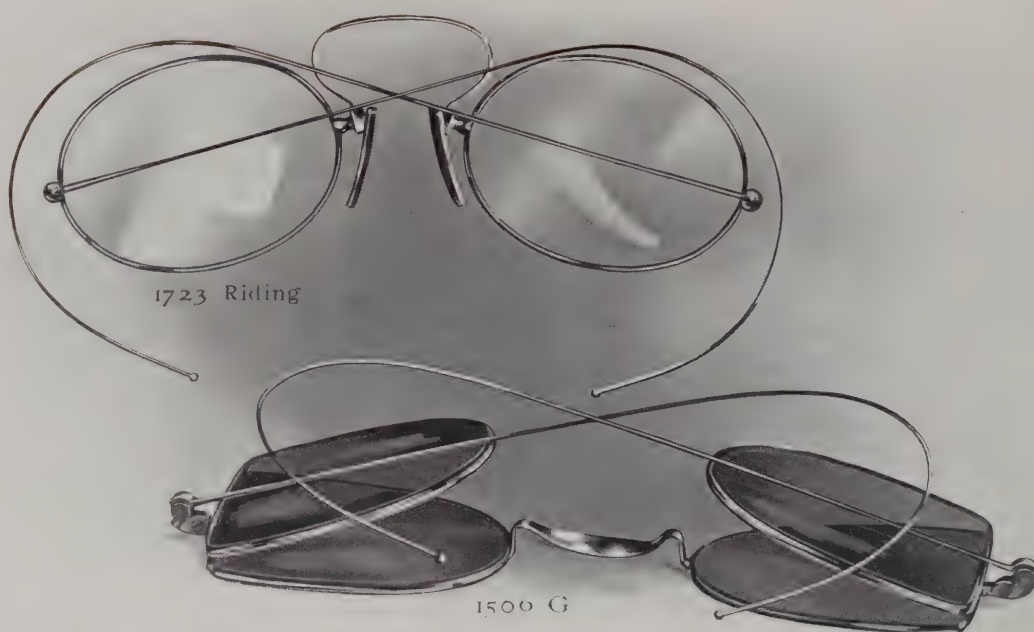
CATALOGUE NUMBER				DESCRIPTION			
Oval Wire Bridge	Oval Wire Bridge	Rigid Bar Spring	"AA" Bar Spring				
1519	1529	1539	1539 AA	-	-	-	Medium

GOLD-FILLED MEDIO GRAB FRONT FRAMES. — PATENTED

CATALOGUE NUMBER				DESCRIPTION			
For "SS" Bridge	For "C" Bridge						
1549 Medio	1559 Medio	-	-	-	-	-	Medium

No. 1529 style sometimes called Grab Back.

No. 1529 style supplied with F eye when so ordered. Specify size of eye desired. See page 29.



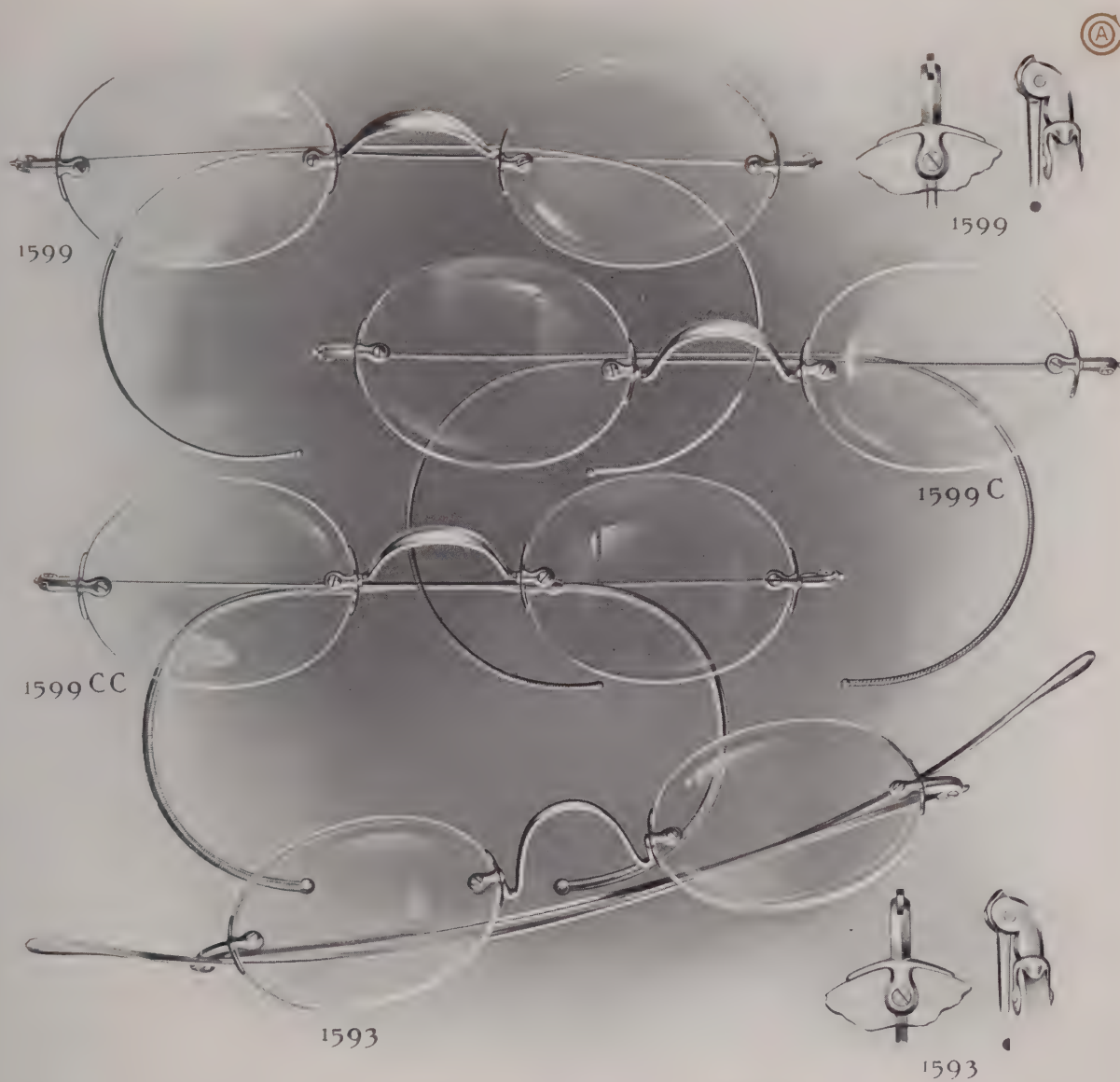
GOLD-FILLED COMBINATION AND SPECTACLETTE FRAMES

CATALOGUE NUMBER												DESCRIPTION
Riding Temple (No. 1558)												
Invisible End Piece												
Solid Joint												Medium Weight
1723 Riding	-	-	-	-	-	-	-	-	-	-	-	Combination, Offset
1726 Riding	-	-	-	-	-	-	-	-	-	-	-	Combination, Adjustable
1725	-	-	-	-	-	-	-	-	-	-	-	Spectaclette
Cable Temple (No. 1558 C)												
1723 Riding C	-	-	-	-	-	-	-	-	-	-	-	Combination, Offset
1726 Riding C	-	-	-	-	-	-	-	-	-	-	-	Combination, Adjustable
1725 C	-	-	-	-	-	-	-	-	-	-	-	Spectaclette

GOLD-FILLED DOUBLE-EYE HORSESHOE FRAMES

CATALOGUE NUMBER													DESCRIPTION
Riding Temple													
Rounded End Piece													
Swaged Cap Joint													"SS" Bridge, Medium Weight
1506 P	-	-	-	-	-	-	-	-	-	-	-	-	Plated End Piece
1506 G	-	-	-	-	-	-	-	-	-	-	-	-	Gold End Piece
Cable Temple													
1506 P.C.	-	-	-	-	-	-	-	-	-	-	-	-	Plated End Piece
1506 G.C.	-	-	-	-	-	-	-	-	-	-	-	-	Gold End Piece

No. 1725 (Style of No. 818, page 58, Gold Section) may be supplied also with Sanitary Guards.
 Cork Guards supplied unless otherwise ordered on above Combination and Spectaclette Frames.
 Supplied in H, HH and HHH eye. For sizes, see Introductory Section, page 29.



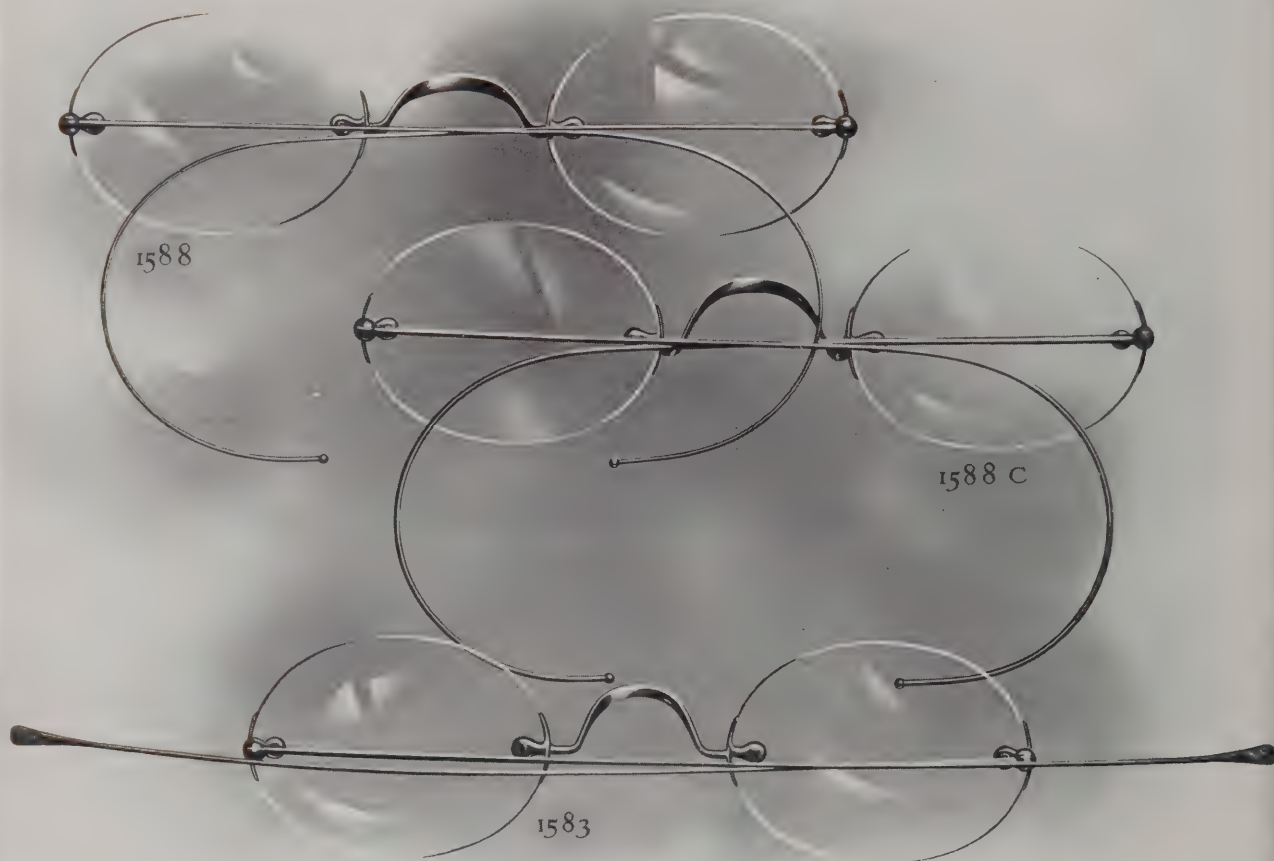
GOLD-FILLED SPECTACLE MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

Beveled End Piece Solid Joint	Straight Temple	
	1592	Medium, Round
	1593	Medium, Half-round
1599	Riding Temple	
	1599 1/2	Medium
		Heavy
1599 C	Cable Temple	
	1599 1/2 C	Medium
		Heavy

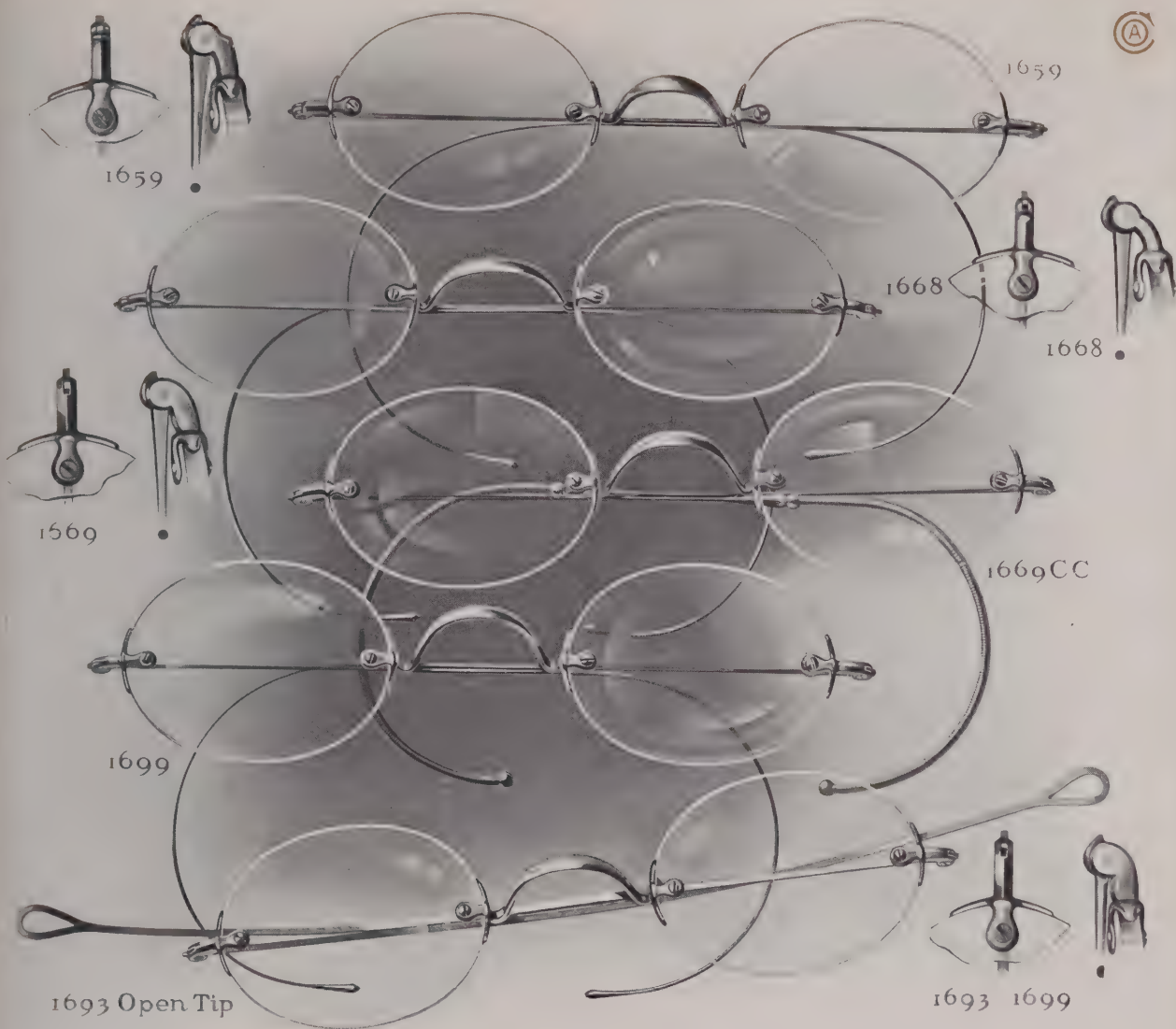
Specify "C" or "SS" Bridges on Nos. 1592 and 1593



GOLD-FILLED SPECTACLE MOUNTINGS

CATALOGUE NUMBER										DESCRIPTION
										Straight Temple
Patented Invisible End Piece										
Solid Joint										
1582	-	-	-	-	-	-	-	-	-	Medium, Round
1583	-	-	-	-	-	-	-	-	-	Medium, Half-round
										Riding Temple
1588	-	-	-	-	-	-	-	-	-	Medium
										Cable Temple
1588 C	-	-	-	-	-	-	-	-	-	Medium

Specify "C" or "SS" Bridges on Nos. 1582 and 1583



GOLD-FILLED SPECTACLE MOUNTINGS.—PATENTED STYLES

CATALOGUE NUMBER

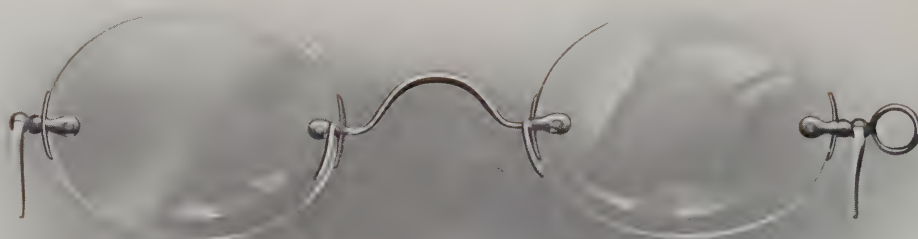
DESCRIPTION

Straight Temple											Extra Finish, Medium Weight
Solid Joint											
1692	-	-	-	-	-	-	-	-	-	-	Round Temple, Beveled End Piece
1693	-	-	-	-	-	-	-	-	-	-	Half-round Temple, Beveled End Piece
Riding Temple											Fancy End Piece Light Fancy End Piece Light Beveled End Piece Beveled End Piece
1659	-	-	-	-	-	-	-	-	-	-	
1668	-	-	-	-	-	-	-	-	-	-	
1669	-	-	-	-	-	-	-	-	-	-	
1699	-	-	-	-	-	-	-	-	-	-	
Cable Temple											Fancy End Piece Light Fancy End Piece Light Beveled End Piece Beveled End Piece
1659 C	-	-	-	-	-	-	-	-	-	-	
1668 C	-	-	-	-	-	-	-	-	-	-	
1669 C	-	-	-	-	-	-	-	-	-	-	
1699 C	-	-	-	-	-	-	-	-	-	-	

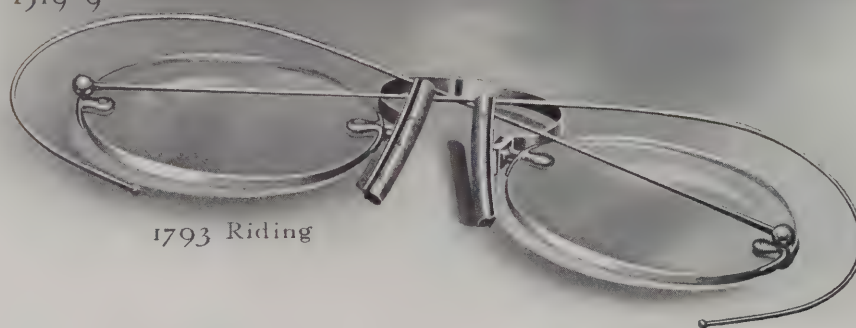
Flat-butt, Pear Tip Temples regularly supplied on above Riding Temple Frames.

Flush Bridges regularly supplied on all above styles except Nos. 1659 and 1659 C.

Specify whether "C" or "SS" Bridges are wanted in ordering above Straight Temple Frames.



1519-9



1793 Riding

GOLD-FILLED GRAB FRONT MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

1519-9

1520-9

Oval Wire Bridge, with Handle and Hooks
Medium

No. 1520.9 style sometimes called Grab Back.

GOLD-FILLED MEDIO GRAB FRONT MOUNTINGS.—PATENTED

CATALOGUE NUMBER

DESCRIPTION

For "SS" Bridge

For "C" Bridge

Oval Wire Bridge, No Handle

1549-9

1559-9

Medium

If "Showy" Bridge is desired, order should so specify.

GOLD-FILLED COMBINATION AND SPECTACLETTE MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

Patented Invisible End Piece
Solid Joint

Riding Temple (No. 1599)

1793 Riding

1796 Riding

1598

Medium Weight
Combination, Offset
Combination, Adjustable
Spectaclette

Cable Temple (No. 1599 C)

1793 Cable

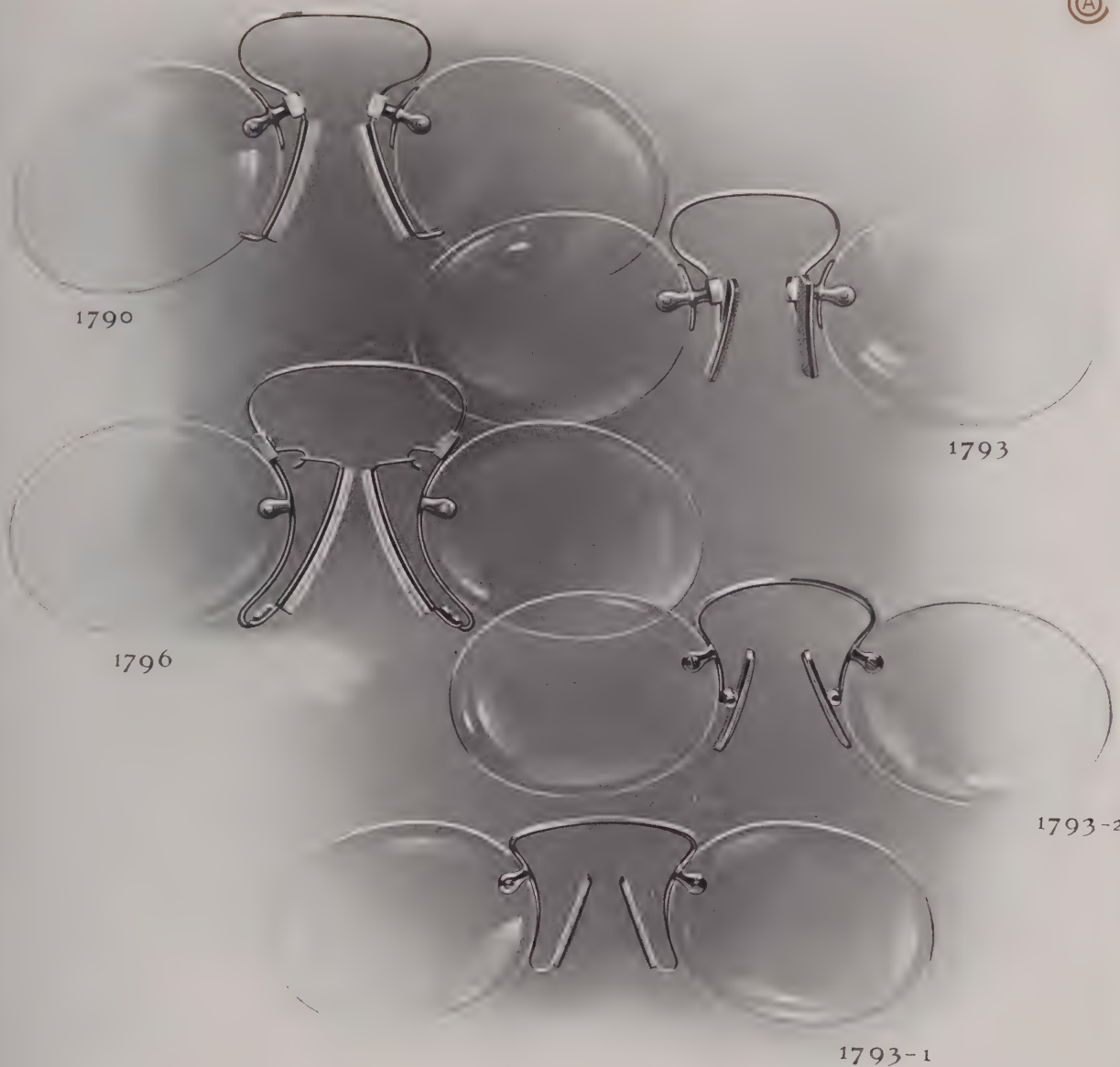
1796 Cable

1598 C

Combination, Offset
Combination, Adjustable
Spectaclette

Cork Guards supplied unless otherwise ordered.

No. 1598 style of No. 898, see page 62.



GOLD-FILLED EYEGGLASS MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

1790
1791
1793
1796
1797

Medium Weight
Rigid
Long Offset
Offset
Adjustable
Adjustable Offset

European Styles

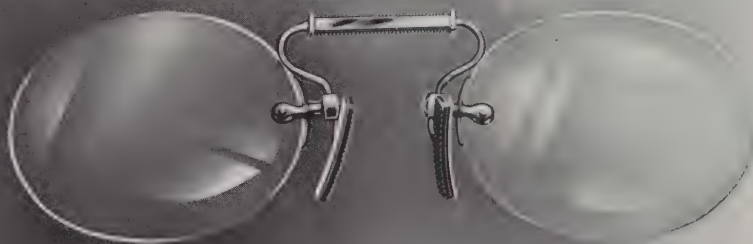
1793-1
1793-2

Light Weight
Flexible Guard
Rocking Guard

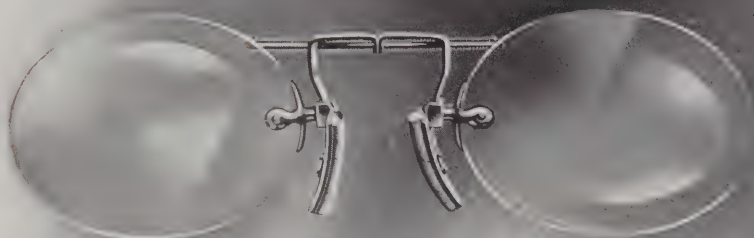
Cork Guards supplied unless otherwise ordered.



1790 AA



1793 AA



1793 D



1787

GOLD-FILLED BAR SPRING EYEGGLASS MOUNTINGS

CATALOGUE NUMBER										DESCRIPTION
"AA"		"D"		"F"		Rigid Bar				
1790 AA	-	1790 D	-	1790 F	-	-	-	-	-	Medium, Rigid
1793 AA	-	1793 D	-	1793 F	-	-	-	-	-	Medium, Offset
						1795 L	-	-	-	Light, Rocking

GOLD-FILLED REVLUC EYEGGLASS MOUNTINGS

CATALOGUE NUMBER	DESCRIPTION
1782	Medium Weight
1787 K	Interchangeable Offset
1787 S	Rocking
	Solid

Cork Guards supplied unless otherwise ordered.
No. 1795 L style of No. 1735 L. see page 79.

STEEL, ALUMNICO, ALUMNICA
GERMAN SILVER, ROMAN
ALLOY AND REGALOID
SPECTACLES AND EYEGLASSES





STEEL, ALUMNICO, ALUMNICA, GERMAN SILVER, ROMAN ALLOY AND REGALOID SPECTACLES AND EYEGLASSES

First Manufacture The first steel spectacle frames made in America were produced by the industry from which the American Optical Company sprung. Previous to this, steel goods had been imported from England, France and Germany. Being the first and foremost American manufacturers of steel optical wares, it is but natural that the wide experience thus obtained, coupled with the extensive manufacturing facilities enjoyed, should have obtained for the AOC Co steel products a notable reputation for superior quality and finish.

Temper and Color The greatest care is exercised in the selection of the stock to insure the evenness of temper so necessary to perfect results. All through the AOC Co steel line this characteristic temper will be found, even to the smallest parts, such as screws, end pieces, etc. AOC Co steel wares are finished blue, bronze or nickel-plated, as required. *Nickel finish is supplied unless otherwise ordered.*

Other Metals In this department we also manufacture spectacles, eyeglasses and material in the following important metals: Alumnico, Alumnica, German Silver, Roman Alloy and Regaloid. Although shown and described in other parts of this catalogue, we make in the same department Trial Frames, Trial Rings, Automobile Goggle fronts and sundry other goods.

The product of this Department embraces over 300 styles of spectacle and eyeglass frames and mountings, and about 60 styles of trial frames. Here are employed over 600 persons to produce a monthly output exceeding 18,000 dozen.

Alumnico is a special white metal alloy made exclusively by the American Optical Company and possessing many important properties which lend themselves particularly to the manufacture of high grade optical wares. Among these are great ductility, evenness of temper, attractive color and ability to resist tarnish. The wide popularity of the Alumnico line has sustained all our claims for the excellence of these

goods made at the time we first introduced them to the optical world. The name ALUMNICO is our registered trade mark and is applied exclusively to the AOCo product, although it has, together with the goods themselves, been imitated by others, a recognition of the superior excellence of the AOCo line.

In Alumnico spectacle frames we employ many of the special patented features that have made our gold-filled goods so well and favorably known. The popular pear tip temple is regularly supplied on Nos. 1338 and 1358 frames and can be supplied on other styles when so ordered.

Alumnica is a grade of stock resembling *Alumnico*, but of somewhat lower quality.

German Silver is a very satisfactory metal for low grade goods. It is regularly finished with nickel plate.

Roman Alloy (imitation gold) frames and mountings are made in large quantities with the idea of upholding quality on the cheaper lines, and yet being able to meet the competition of inferior makes.

Regaloid We call special attention to the AOCo line of Regaloid goods which are made from a special yellow alloy, admitting of an extra fine finish. They are highly polished and gold-plated, having an excellent color and are in every respect the closest imitation of gold frames made. In color they resemble 14k Gold goods.

Certain styles in spectacles listed on the following pages are mentioned as being supplied in AOCo B and BC Assortments. The AOCo Assortments for "C" and "SS" bridges are given on page 37 of the Introductory Section.

REGISTERED TRADE MARKS

General trade mark ©

For Ajax Strap Goods (A)

For Alumnico Goods ALUMNICO

For Alumnico Goods (Patented Styles), ALUMNICO PAT.

For Alumnica Goods, ALUMNICA

For Roman Alloy Goods, ROMAN ALLOY

For Regaloid Goods, REGALOID

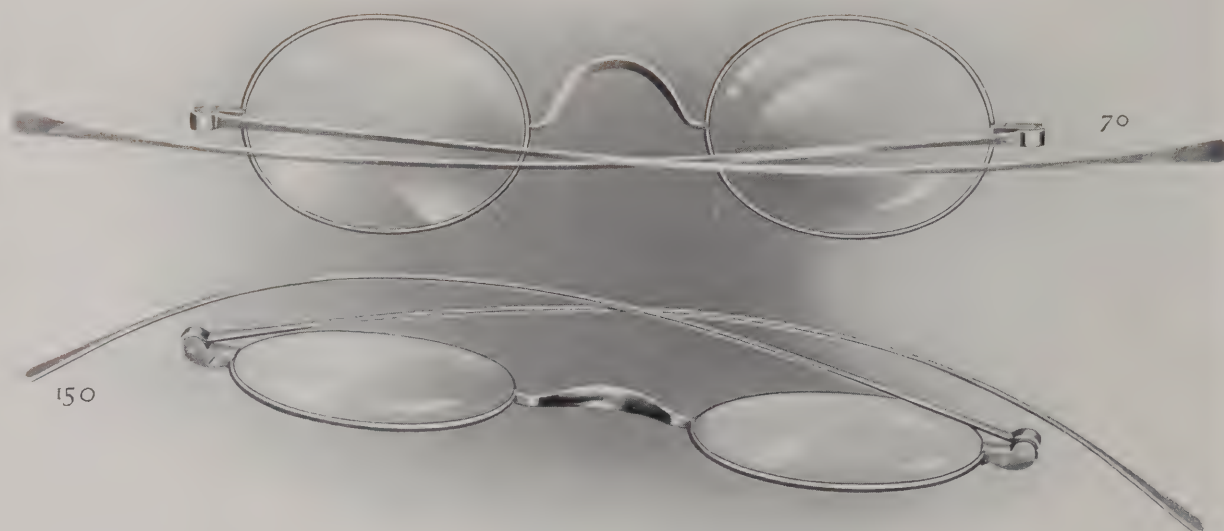
For other trade marks, see page 27



Steel Spectacles ready for finishing



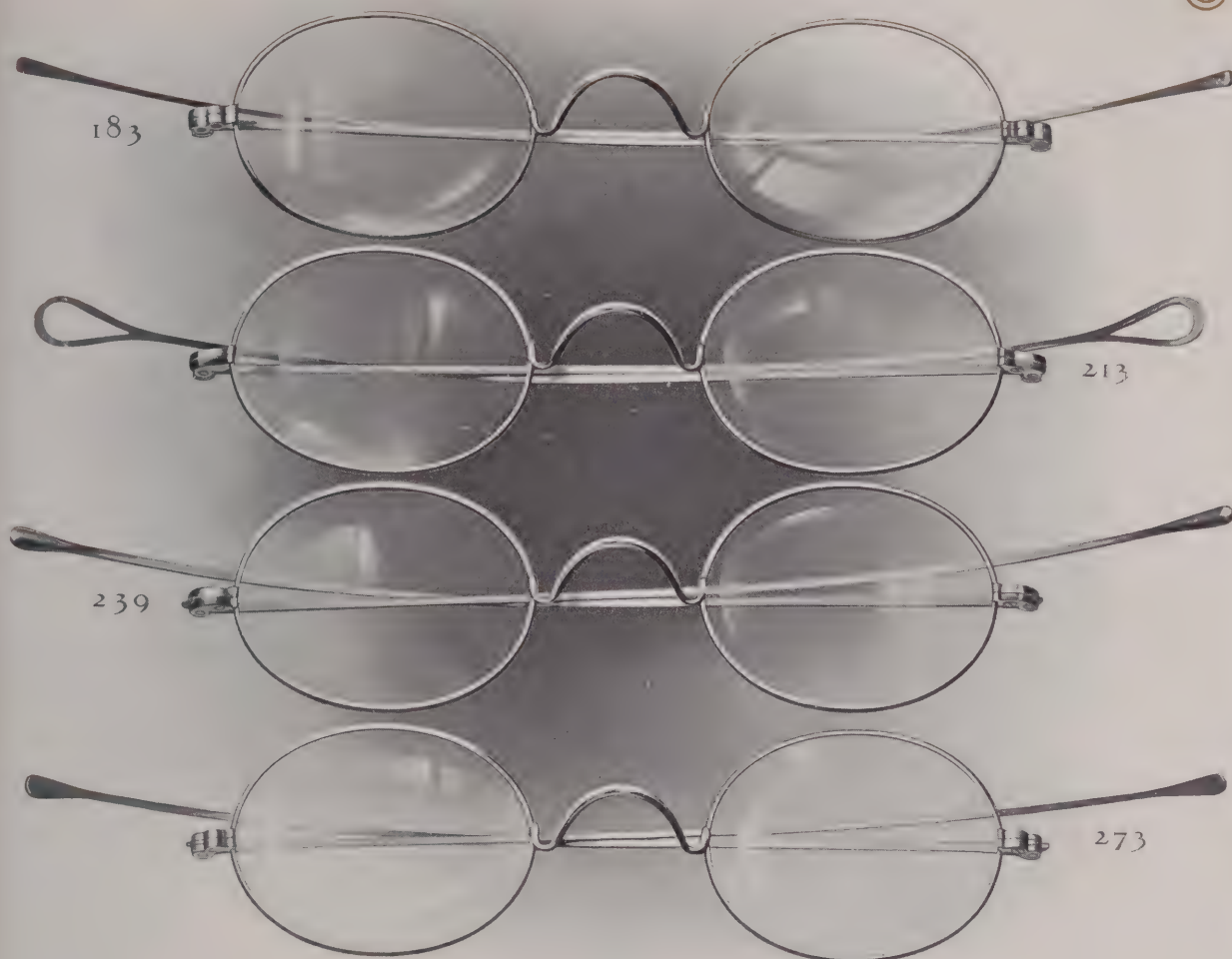
Soldering Alumnico Fronts



STEEL SPECTACLE FRAMES

CATALOGUE NUMBER		DESCRIPTION
Cap Joint	Solid Joint	Flat Straight Temple, "C" Bridge
	10	Ordinary Quality, Oval Wire Bridge, Special End Piece
30	-	Fair Quality, Rounded End Piece
50	-	Medium Quality, Flat Back End Piece
60	-	Medium Quality, Rounded End Piece
70	-	Good Quality, Slight Bevel on End Piece
80	-	Good Quality, Fancy End Piece
150	-	Fine Quality, Small Rounded End Piece
160	-	Fine Quality, Small Oval Back End Piece
21	-	Extra Fine Quality, Small Rounded End Piece, Good Weight

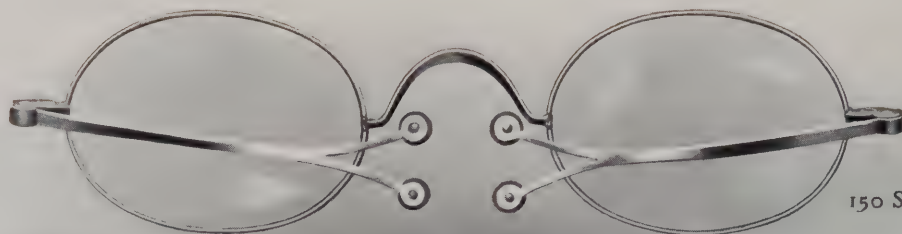
No. 10 is supplied in AOCo BC Assortment of "C" Bridges; all other styles in Regular AOCo Assortment of "C" Bridges. See page 37. For style of Special End Piece supplied on No. 10, see illustration of No. 308, page 98.



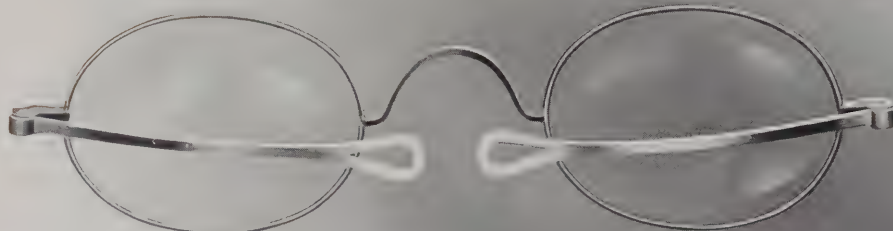
STEEL SPECTACLE FRAMES

CATALOGUE NUMBER									DESCRIPTION
Cap Joint	Solid Joint			Swaged Cap Joint					Half-round Straight Temple, "C" Bridge
53	-	-	-	-	-	-	-	-	Medium Quality, Flat Back End Piece
63	-	-	-	-	-	-	-	-	Medium Quality, Rounded End Piece
			58	-	-	-	-	-	Medium Quality, Ogee End Piece
73				-	-	-	-	-	Good Quality, Slight Bevel on End Piece
			78	-	-	-	-	-	Good Quality, Ogee End Piece
103							113		Good Quality, Ball End Piece
							203		Good Quality, Large Open Tip, English Style, Beveled End Piece
153									Fine Quality, Small Rounded End Piece
			158						Fine Quality, Ogee End Piece
			173						Extra Quality, Ogee End Piece
183									Extra Fine Quality, light, as illustrated
							213		Extra Fine Quality, Large Open Bent Tip, English Style, Beveled End Piece
223									Extra Fine Quality, Long Fancy End Piece
			239	-	-	-	233	-	Extra Fine Quality, Beveled End Piece
									Extra Fine Quality, Open Tip, heavy
							253	-	

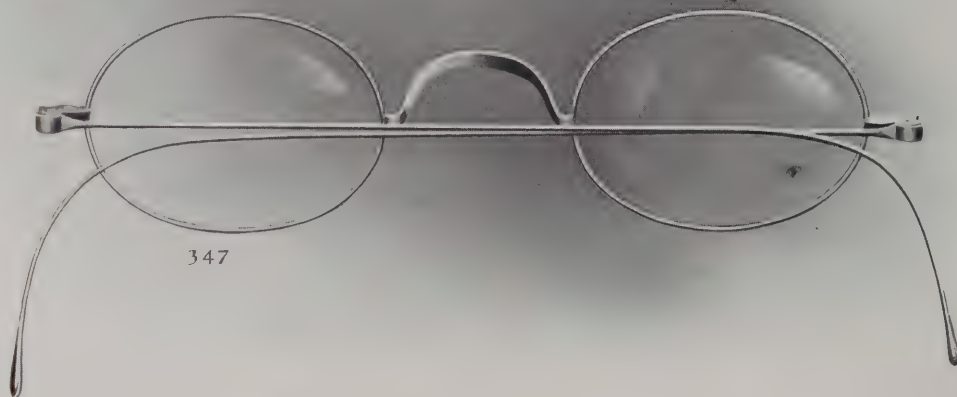
Above Frames regularly supplied with AOCo Assortment of "C" Bridges. See page 37.
No. 273 also furnished with Beveled End Piece when so ordered.



150 Short P T



150 Short O T



347

STEEL SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Short Temple, "C" Bridge

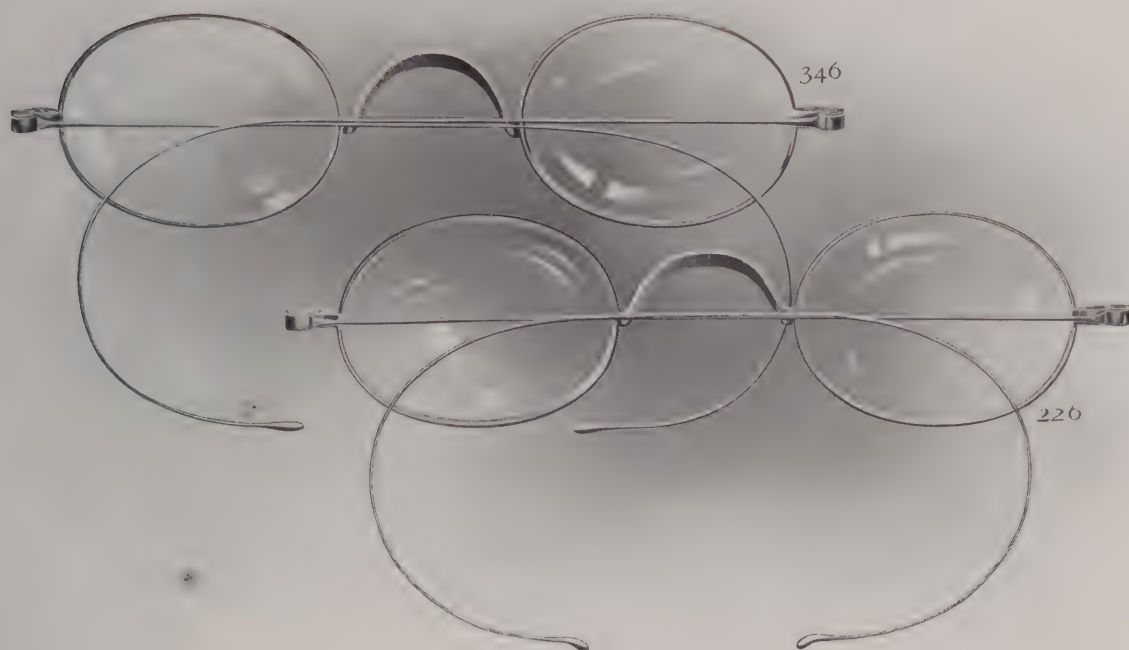
Cap Joint, Padded Tip				Cap Joint, Open Tip					
70	Short P.T.	-	-	70	Short O.T.	-	-	-	Good Quality, Slight Bevel on End Piece
80	Short P.T.	-	-	80	Short O.T.	-	-	-	Good Quality, Fancy End Piece
150	Short P.T.	-	-	150	Short O.T.	-	-	-	Fine Quality, Small Rounded End Piece

Half-riding Temple, "SS" Bridge

Rounded End Piece Cap Joint				Ogee End Piece Solid Joint					
317	-	-	-	317.8	-	-	-	-	Fair Quality
327	-	-	-	327.8	-	-	-	-	Medium Quality
337	-	-	-	337.8	-	-	-	-	Good Quality
Ogee End Piece Cap Joint									
347	-	-	-	347.8	-	-	-	-	Fine Quality
347 Ex	-	-	-	347.8 Ex	-	-	-	-	Extra Fine Quality

Half-riding Temple, "C" Bridge

Rounded End Piece Cap Joint				Ogee End Piece Solid Joint					
57	-	-	-	-	-	-	-	-	Medium Quality
67	-	-	-	-	-	-	-	-	Medium Quality
157	-	-	-	-	-	-	-	-	Fine Quality
167	-	-	-	277	-	-	-	-	Fine Quality



STEEL SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Riding Temple, "SS" Bridge

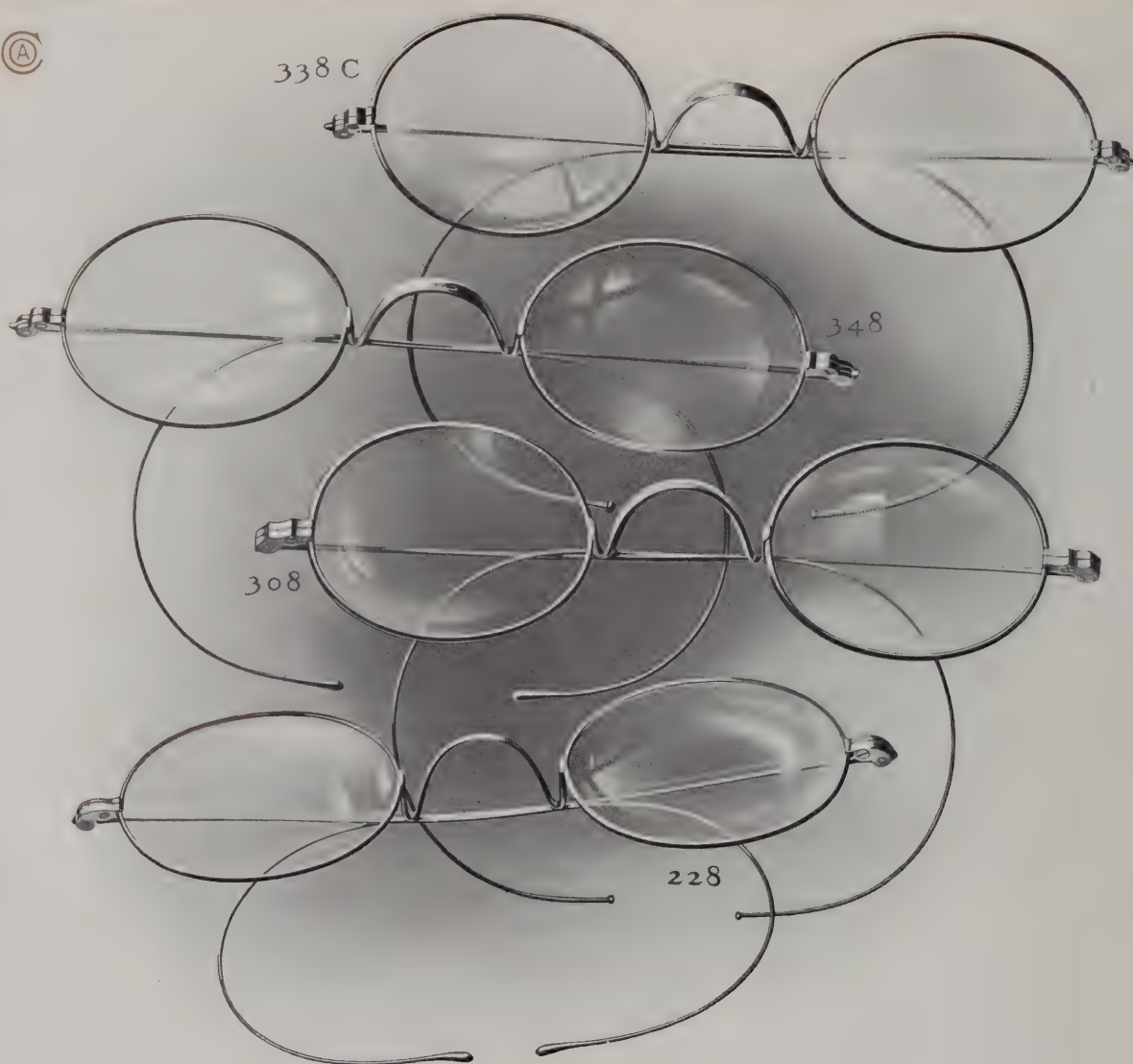
Cap Joint

316	-	-	-	-	-	-	-	-	Fair Quality, Rounded End Piece
326	-	-	-	-	-	-	-	-	Medium Quality, Rounded End Piece
336	-	-	-	-	-	-	-	-	Good Quality, Rounded End Piece
346	-	-	-	-	-	-	-	-	Fine Quality, Ogee End Piece
346 Ex	-	-	-	-	-	-	-	-	Extra Fine Quality, Bent Tip, Ogee End Piece
226	-	-	-	-	-	-	-	-	Extra Fine Quality, Long Beveled End Piece, Bent Tip
236	-	-	-	-	-	-	-	-	Extra Fine Quality, Long Fancy End Piece, Bent Tip

Cable Temple, "SS" Bridge

316 C	-	-	-	-	-	-	-	-	Fair Quality, Rounded End Piece
326 C	-	-	-	-	-	-	-	-	Medium Quality, Rounded End Piece
336 C	-	-	-	-	-	-	-	-	Good Quality, Rounded End Piece
346 C	-	-	-	-	-	-	-	-	Fine Quality, Ogee End Piece
346 Ex C	-	-	-	-	-	-	-	-	Extra Fine Quality, Bent Tip, Ogee End Piece
356 C	-	-	-	-	-	-	-	-	Extra Fine Quality, Long Fancy End Piece, European Style
226 C	-	-	-	-	-	-	-	-	Extra Fine Quality, Long Beveled End Piece, Bent Tip
236 C	-	-	-	-	-	-	-	-	Extra Fine Quality, Long Fancy End Piece, Bent Tip

No. 326 C may be furnished with No. 263 style End Piece when so ordered. See page 95.



STEEL SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Solid Joint

338
348
358
368
378
388
398
408
418
428

438 Ex
448

458
468
478
488
498
508
518
528

538 Ex
548

Riding Temple, "SS" Bridge

- Ordinary Quality, Oval Wire Bridge, Special End Piece
- Fair Quality, Ogee End Piece
- Medium Quality, Ogee End Piece
- Good Quality, Ogee End Piece
- Fine Quality, Ogee End Piece
- Fine Quality, Beveled End Piece, Bent Tip
- Extra Fine Quality, Ogee End Piece, Bent Tip
- Extra Fine Quality, Beveled End Piece, Bent Tip

Cable Temple, "SS" Bridge

- Ordinary Quality, Oval Wire Bridge, Special End Piece
- Fair Quality, Ogee End Piece
- Medium Quality, Ogee End Piece
- Good Quality, Ogee End Piece
- Fine Quality, Ogee End Piece
- Fine Quality, Beveled End Piece
- Extra Fine Quality, Ogee End Piece
- Extra Fine Quality, Beveled End Piece

Nos. 308 and 308 C regularly supplied with A0Co B Assortment of "SS" Bridges. See page 37.



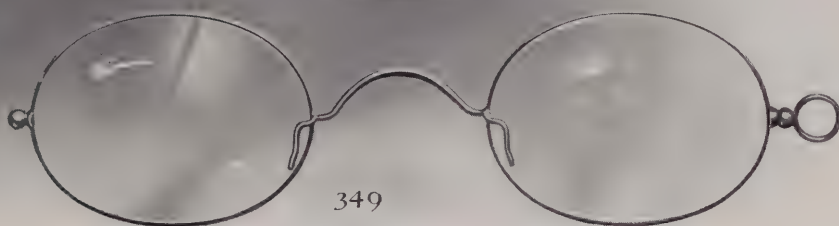
319



329



339



349

STEEL GRAB FRONT FRAMES

CATALOGUE NUMBER

DESCRIPTION

Oval Wire Bridge

Oval Wire Bridge

Rect. Bar Spring

"AA" Bar Spring

319

329

339

339 AA

Medium

STEEL MEDIO GRAB FRONT FRAMES.—PATENTED

CATALOGUE NUMBER

DESCRIPTION

For "SS" Bridge

For "C" Bridge

Round Wire Bridge

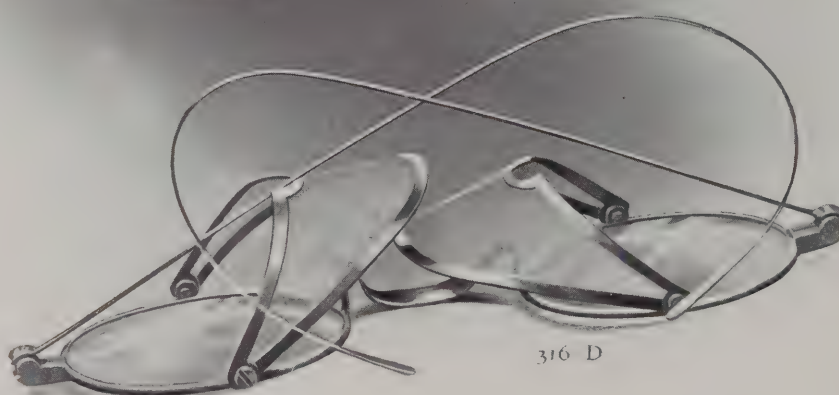
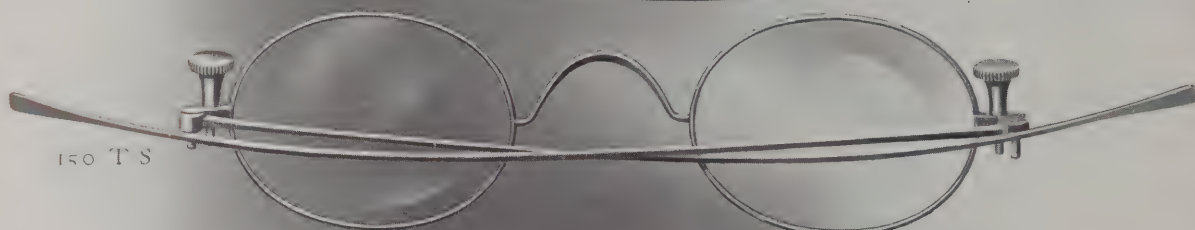
349 Medio

359 Medio

Medium

No. 329 style, sometimes called Grab Back.

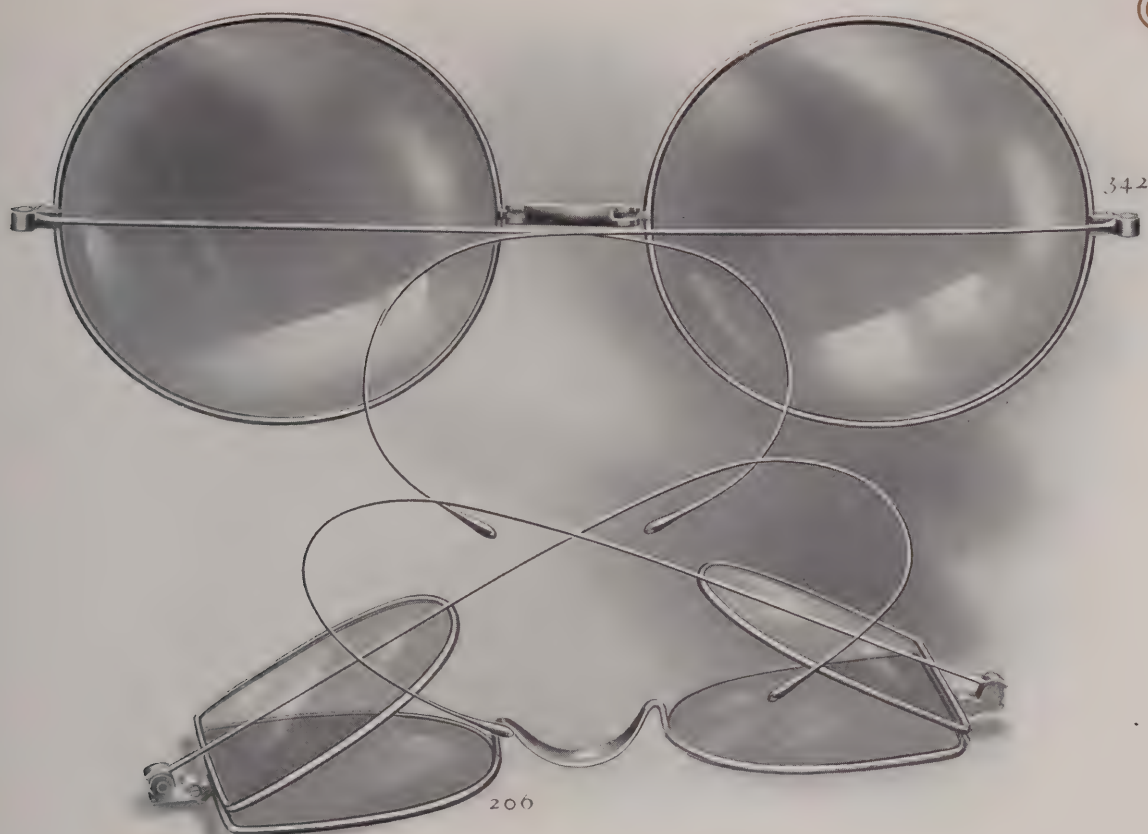
No. 319 Eyes only, with two Hooks on each eye supplied when so ordered.



STEEL SPECTACLE FRAMES

STEEL DRIVING SPECTACLE FRAMES

* Supplied Nickel-plated unless otherwise ordered.



STEEL DRIVING SPECTACLE FRAMES

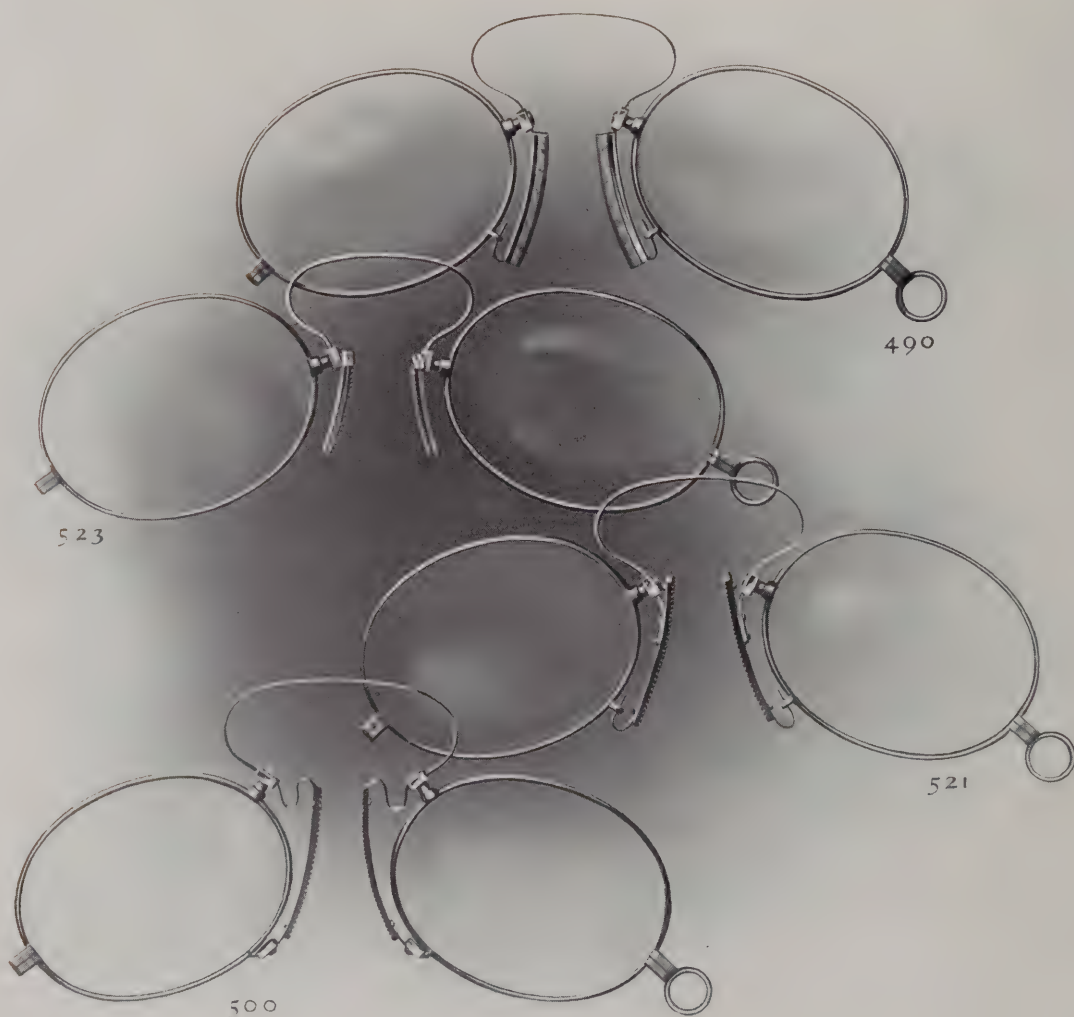
CATALOGUE NUMBER	DESCRIPTION	
	Riding Temple	
Cap Joint		Jointed Bridge, Eye, 59.5 x 54.7 mm
342 - - - - -		Fine Quality
	Cable Temple	
342 C - - - - -		Fine Quality

STEEL SPECTACLE FRAMES — DOUBLE EYE

CATALOGUE NUMBER	DESCRIPTION	
	Straight Temple	
Horseshoe Cap Joint	Oval Cap Joint	
200 - - - - -	210 - - - - -	Fine Quality, "C" Bridge
	Riding Temple	
206 - - - - -	216 - - - - -	Fine Quality, "SS" Bridge
	Cable Temple	
206 C - - - - -	216 C - - - - -	Fine Quality, "SS" Bridge

Double Eye Horseshoe Frames furnished in H, HH, or HHH Eye as ordered. See page 29.

Above styles, Nos. 342 and 342 C, supplied with White, Smoke or Amber Coquille Lenses as desired.



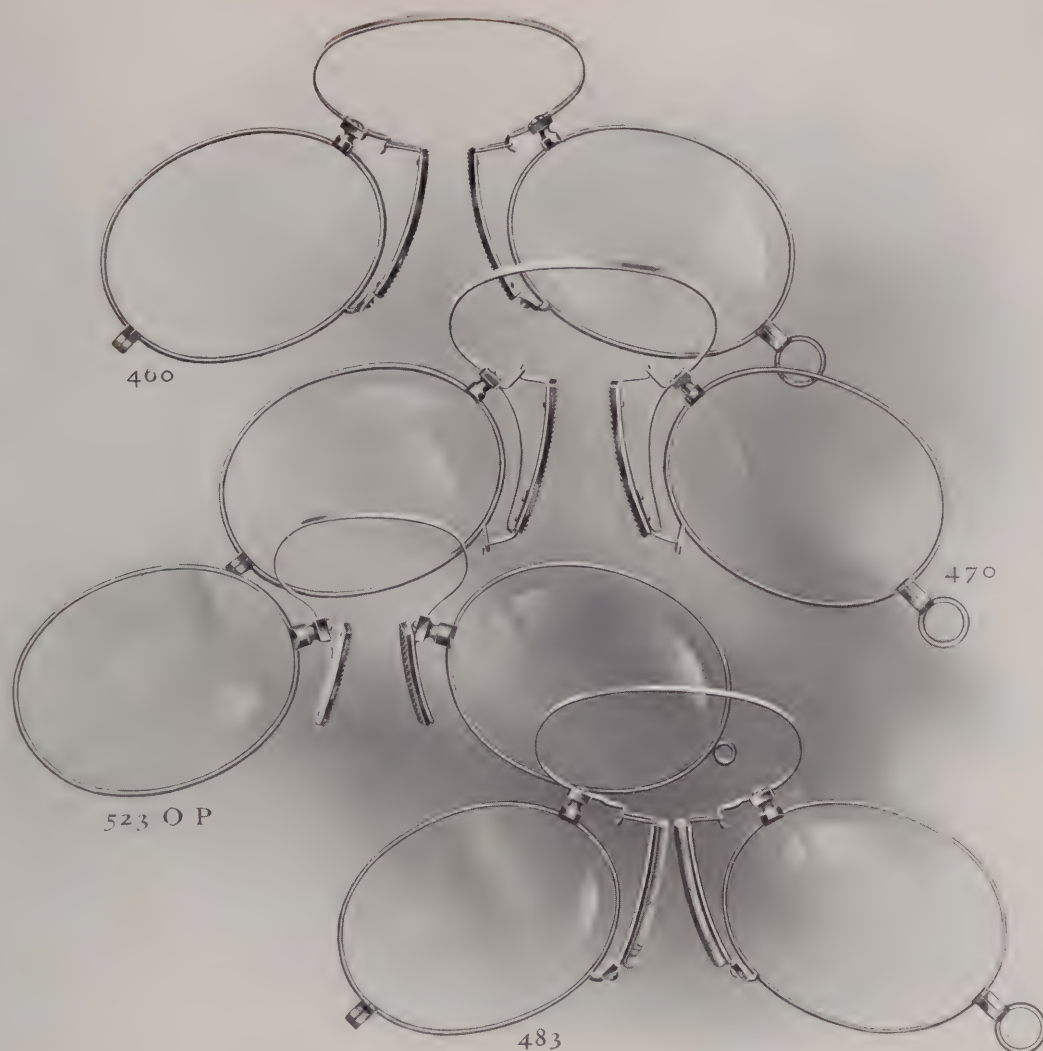
STEEL EYEGLOSS FRAMES

CATALOGUE NUMBER	DESCRIPTION	CATALOGUE NUMBER	DESCRIPTION
	Rigid Guard		Long Offset Guard
475 1/2	Medium Quality	491	Good Quality
478	Good Quality	521	Fine Quality
520	Fine Quality		Solid Adjustable Guard
520	Fine Quality, Light	500	Fine Quality
530	Fine Quality, Light, Ball Handle		Long Rigid Guard
540	Extra Fine Quality, Zylonite	420	Ordinary Quality
	Offset Guard	430	Fair Quality
			Miscellaneous Styles
403 1/2	Medium Quality	440	Good Quality, Burbank, Zylonite
403	Good Quality	443	Good Quality, Burbank, Offset, Zylonite
522	Fine Quality, Spring Offset Guards	512	Fine Quality, Adjustable Offset, Spring Top
523	Fine Quality	513	Fine Quality, Flexible Offset
		527	Fine Quality, Adjustable Offset

Cork Guards supplied unless otherwise ordered, except on Nos. 440, 443 and 540 styles as noted above.

Above Frames, except Nos. 420, 430 and 530, regularly supplied with Ring Handles.

* See Material Section for style of Hanger No. 15 G. H., used on No. 527 Frame.



STEEL EYEGLASS FRAMES

CATALOGUE NUMBER	DESCRIPTION	CATALOGUE NUMBER	DESCRIPTION
	Adjustable Guard		Double Adjustable Offset Guard
450	Good Quality, Long Guards	473	Good Quality
460½	Medium Quality		Open Post, Ring for Cord
460	Good Quality	523 O.P.	Fine Quality, Rigid
480	Fine Quality	523 O.P.	Fine Quality, Offset
481	Fine Quality, Long Guards, for narrow P. D.	483 O.P.	Fine Quality, Adjustable
	Adjustable Offset Guard	483 O.P.	Fine Quality, Adjustable Offset
453	- Good Quality, Long Guards		Double Post, Ring for Cord
463½	- Medium Quality	520 D.P.	Fine Quality, Rigid
463	- Good Quality	523 D.P.	Fine Quality, Offset
483	- Fine Quality	480 D.P.	Fine Quality, Adjustable
	Double Adjustable Guard	483 D.P.	Fine Quality, Adjustable Offset
470	Good Quality		

Cork Guards supplied unless otherwise ordered.

Ring Handles supplied on all above Frames except O.P. and D.P. styles.



460 P

460 L

460 FT

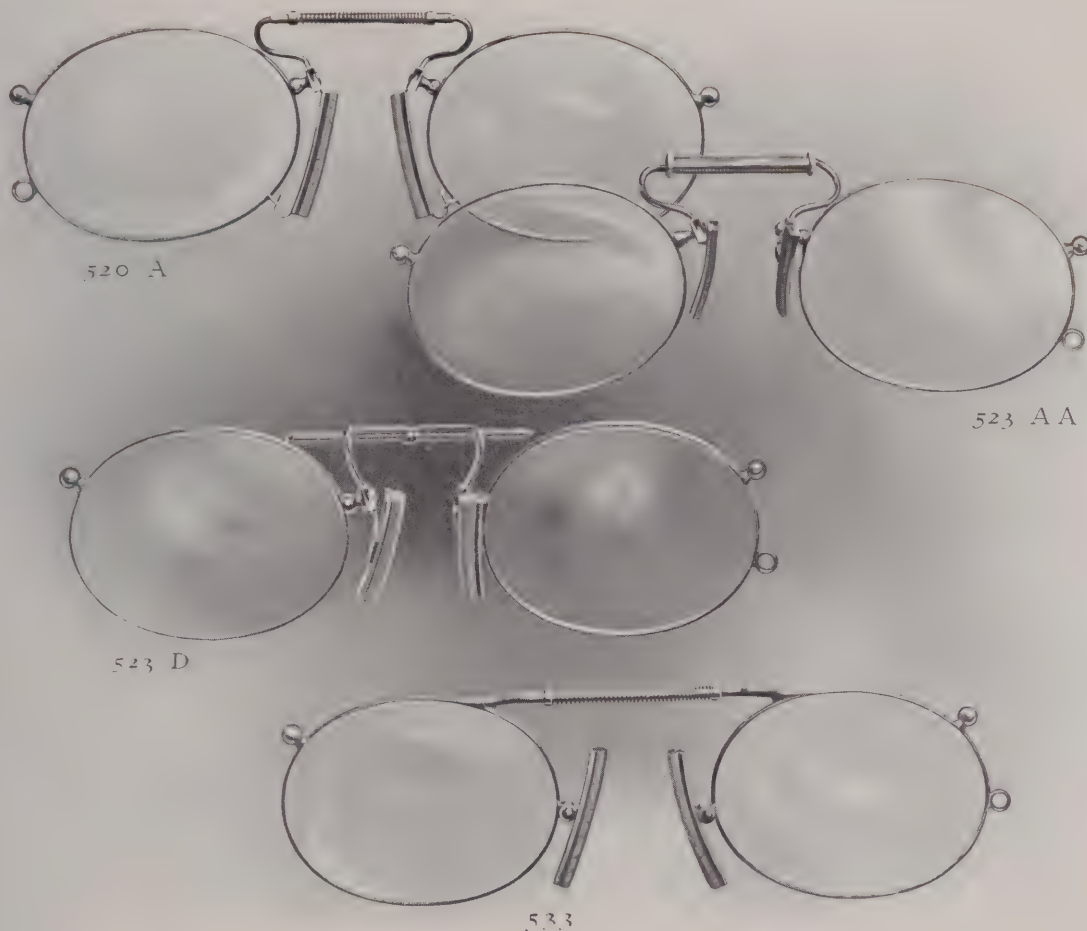
460 LL

480 E

STEEL EYEGLASS FRAMES. — EUROPEAN STYLES

CATALOGUE NUMBER				DESCRIPTION
French Style 70 mm. tied spring	English Style 63 mm. tied spring	English Style 89 mm. tied spring	Perfection Style 140 mm. spring	Adjustable Guard
460 F.T.	460 E	460 L	460 P	Good Quality
480 F.T.	480 E	460 LL	480 P	Fine Quality
				Adjustable Offset Guard
463 F.T.	463 E	463 L		Good Quality
483 F.T.	483 E	463 LL		Fine Quality

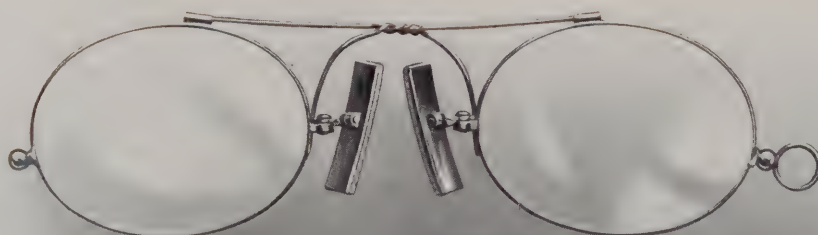
Nos. 460 L, 463 L, 460 LL, and 463 LL regularly supplied with Catch and Pin



STEEL BAR SPRING EYEGLASS FRAMES

CATALOGUE NUMBER				DESCRIPTION	
"A"	"AA"	"D"	"F"	Ring for Cord	
520 A	520 AA	520 D	520 F	- - -	Rigid
523 A	523 AA	523 D	523 F	- - -	Offset
"Astig" or Rigid Bar Spring, Ring for Cord					
Round Bar					
533	-	-	-	-	Rocking Offset
513	-	-	-	-	Offset

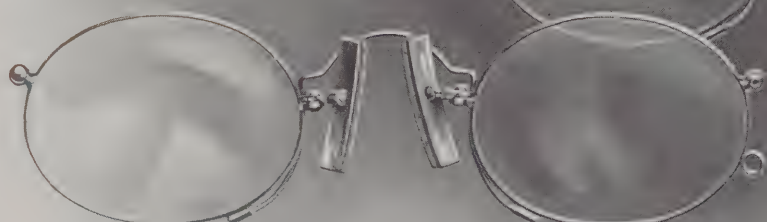
Cork Guards supplied unless otherwise ordered.



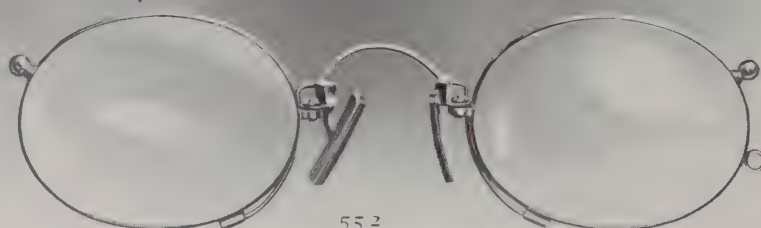
555R



557 S



557 R



552

STEEL REVLUC EYEGLOSS FRAMES

CATALOGUE NUMBER

DESCRIPTION

Interchangeable Offset

Rocking

Solid

550

555 R

555 S

Medium

551

557 R

557 S

Medium

552

557 R

557 S

Medium

STEEL EYEGLOSS FRAMES — GRAB TEMPLE

CATALOGUE NUMBER

DESCRIPTION

520 G.T.

Rigid

523 G.T.

Offset

526 G.T.

Solid Adjustable

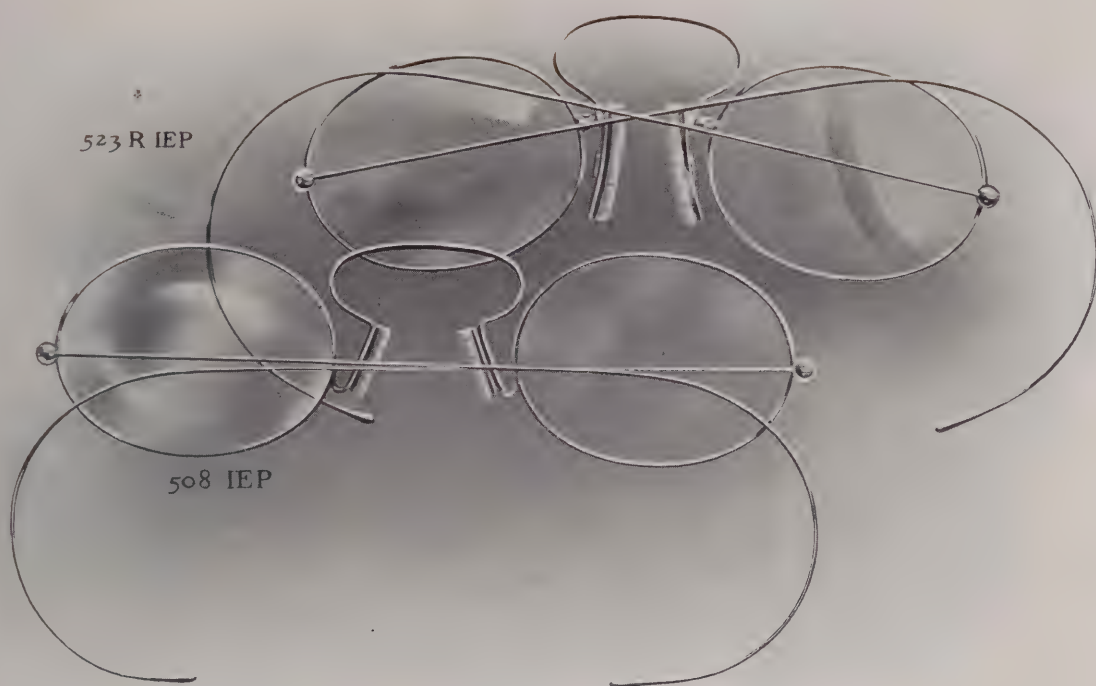
580 G.T.

Adjustable

583 G.T.

Adjustable Offset

No. 551 has Spring style of No. 555 without Cross Bar.
Grab Temples regularly made with Zylonite Pads.
Cork Guards supplied unless otherwise ordered.
See illustration of Grab Temple Frames, page 81.



STEEL COMBINATION AND SPECTACLETTE FRAMES

CATALOGUE NUMBER

DESCRIPTION

		Straight Temple	
Invisible End Piece			
Solid Joint			
502 I.E.P.	- - - -	Spectaclette, Fine Quality	
		Riding Temple	
523 R I.E.P.	- - - -	Combination, Offset, Fine Quality	
480 R I.E.P.	- - - -	Combination, Adjustable, Fine Quality	
508 I.E.P.	- - - -	Spectaclette, Fine Quality	
		Cable Temple	
523 R.C. I.E.P.	- - - -	Combination, Offset, Fine Quality	
480 R.C. I.E.P.	- - - -	Combination, Adjustable, Fine Quality	
508 C I.E.P.	- - - -	Spectaclette, Fine Quality	

STEEL SPECTACLETTE WITHOUT TEMPLES

CATALOGUE NUMBER

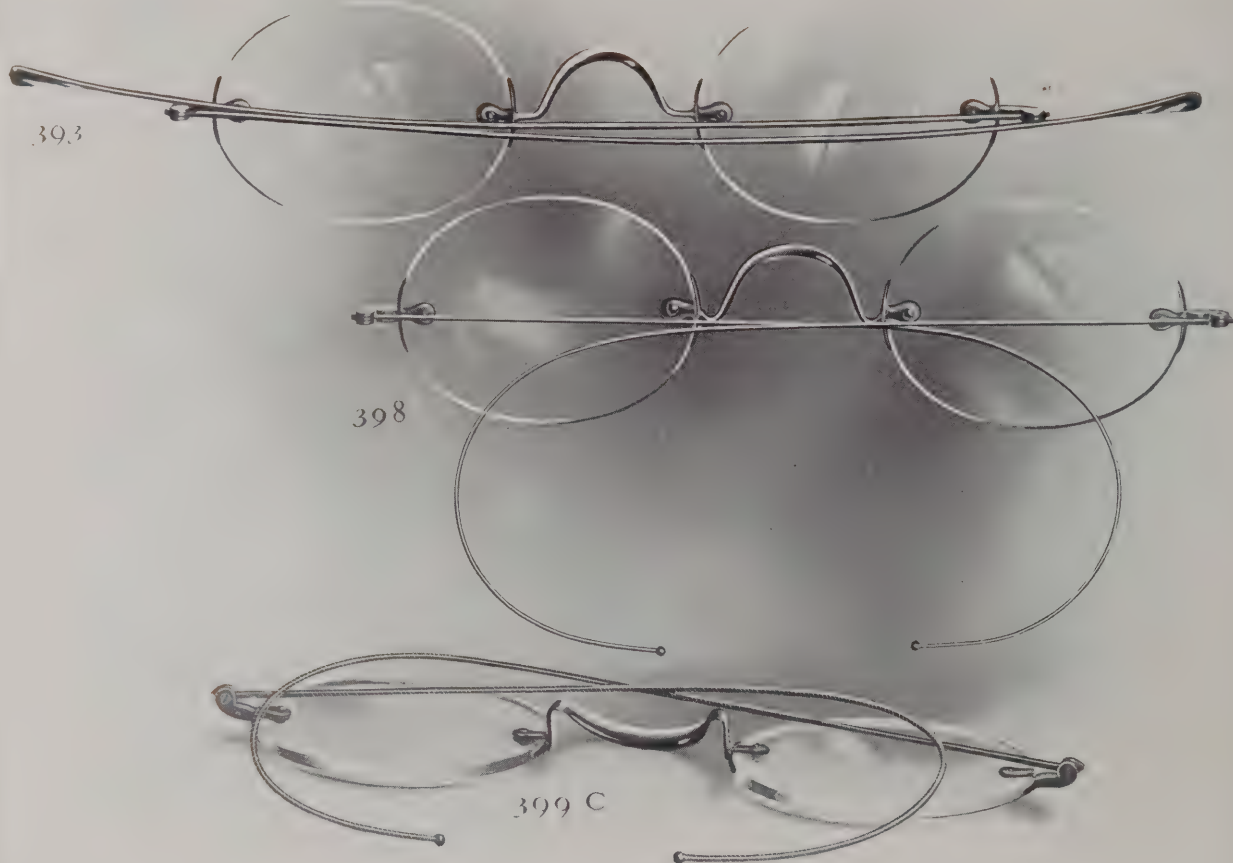
DESCRIPTION

534	Adjustable Spring Guard
539	Adjustable Guard

Cork Guards supplied unless otherwise ordered.

Spectaclette Frames Nos. 502 IEP, 508 IEP and 508 C IEP supplied with Sanitary Guards when so ordered.

See No. 1739, page 80, for illustration style of No. 539.



STEEL SPECTACLE MOUNTINGS

CATALOGUE NUMBER		DESCRIPTION	
Cap Joint	Straight Temple, "C" Bridge		
	Solid Joint		
	393	- - - - -	Good Quality, Half-round Temple, Rounded End Piece
398	Riding Temple, "SS" Bridge		
	380	- - - - -	Ordinary Quality, Rounded End Piece, Flat Strap
	388	- - - - -	Good Quality, Ogee End Piece
	398	- - - - -	Good Quality, Rounded End Piece *
	399	- - - - -	Fine Quality, Beveled End Piece
	399 I.E.P.	- - - - -	Fine Quality, Patented Invisible End Piece
399 C	Cable Temple, "SS" Bridge		
	388 C	- - - - -	Good Quality, Old Style End Piece
	398 C	- - - - -	Good Quality, Rounded End Piece *
	399 C	- - - - -	Fine Quality, Beveled End Piece
	399 C I.E.P.	- - - - -	Fine Quality, Patented Invisible End Piece

No. 380 sold only when fitted with Lenses.

For Invisible End Piece, see page 86.

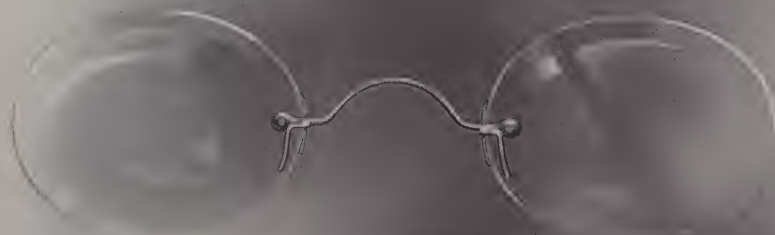
* No. 396 has extra finish and Bent Tip Temples.



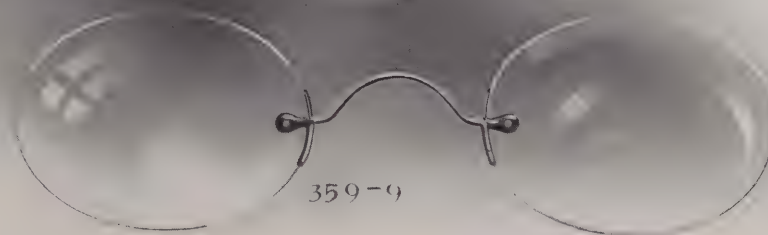
319-9



329-9



349-9



359-9

STEEL GRAB FRONT MOUNTINGS

CATALOGUE NUMBER		DESCRIPTION	
319-9	329-9	- - - - -	Oval Wire Bridge, with Handle and Hooks Medium

STEEL MEDIO GRAB FRONT MOUNTINGS. — PATENTED

CATALOGUE NUMBER		DESCRIPTION	
For "SS" Bridge	For "C" Bridge	- - - - -	Round Wire Bridge, no Handle Medium
349-9	359-9	- - - - -	

No. 32600 style, sometimes called Grab Back



560

590

591

593

599

STEEL EYEGGLASS MOUNTINGS

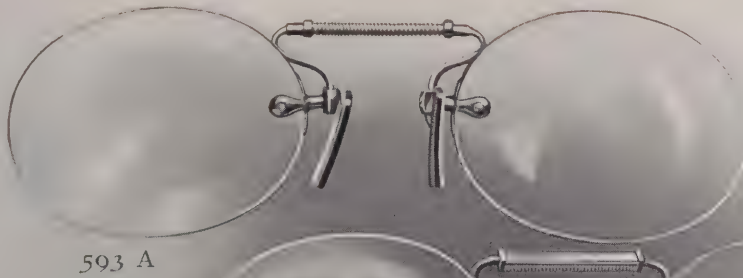
CATALOGUE NUMBER

DESCRIPTION

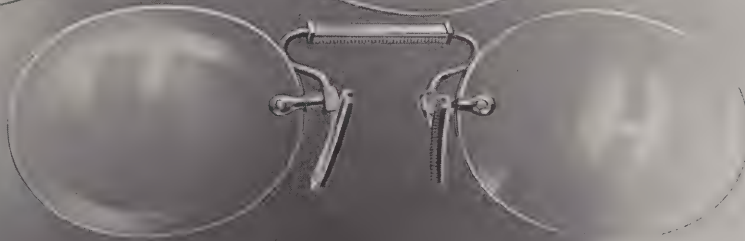
574	Rigid Guard
580	Ordinary Quality, Flat Strap
590	Good Quality, Flat Strap
599	Fine Quality
	Extra Fine Quality, Countersunk Stud Screw, Zylonite
573	Offset Guard
573 B.E.	Ordinary Quality, Flat Strap
583	Ordinary Quality, Flat Strap, Black Enamel Finish, Sanitary Guards
593	Good Quality, Flat Strap
594	Fine Quality
	Fine Quality, for narrow P. D. no Stud Post
591	Long Offset Guard
	Fine Quality
596	Adjustable Guard
	Fine Quality
598	Adjustable Offset Guard
	Fine Quality

Nos. 570 and 573 sold only when fitted with Lenses.

Cork Guards supplied unless otherwise ordered, except Nos. 599 and 573 B.E.



593 A



593 A A



593 D



597 R

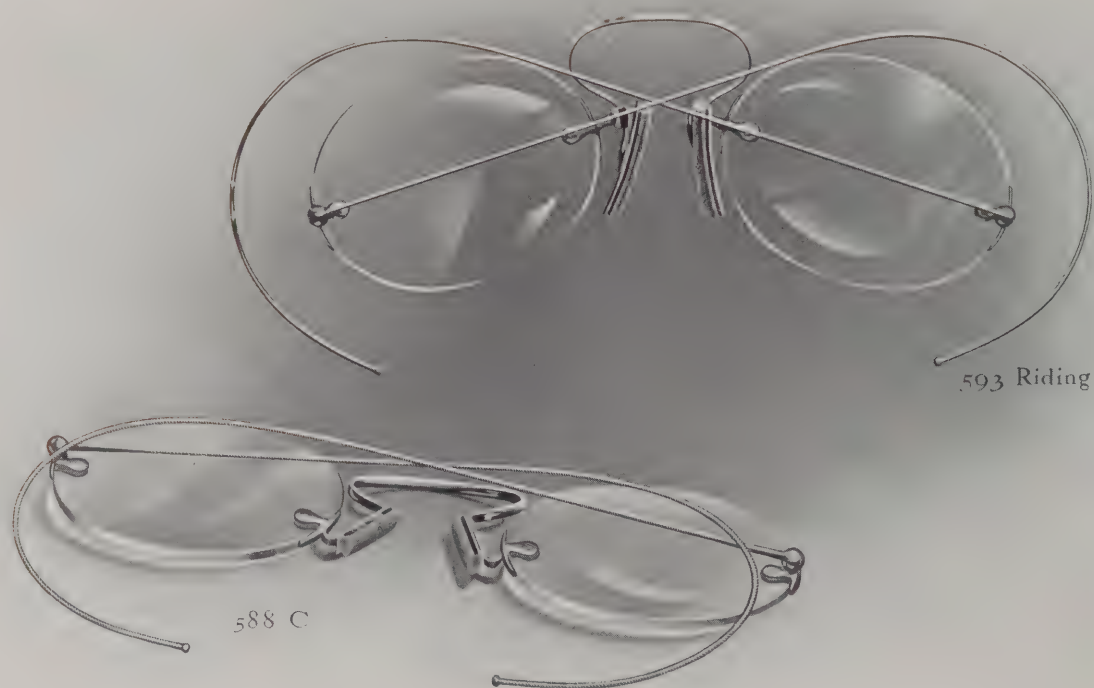
STEEL BAR SPRING EYEGLASS MOUNTINGS

CATALOGUE NUMBER				DESCRIPTION			
590 A	590 AA	-	590 D	-	590 F	-	Rigid
593 A	593 AA	-	593 D	-	593 F	-	Offset

STEEL REVLUC EYEGLASS MOUNTINGS

CATALOGUE NUMBER				DESCRIPTION			
Interchangeable Offset	Rocking	Selling					
592	597 R	-	597 S	-	-	-	Fine Quality

Cork Guards supplied unless otherwise ordered.



STEEL COMBINATION AND SPECTACLETTE MOUNTINGS

CATALOGUE NUMBER														DESCRIPTION	
Riding Temple (No. 398)															
Patented Invisible End Piece															
Solid Joint														Fine Quality	
590	Riding	-	-	-	-	-	-	-	-	-	-	-	-	-	Combination, Rigid
593	Riding	-	-	-	-	-	-	-	-	-	-	-	-	-	Combination, Offset
588		-	-	-	-	-	-	-	-	-	-	-	-	-	Spectaclette
Cable Temple (No. 398 C)															
590	Riding C	-	-	-	-	-	-	-	-	-	-	-	-	-	Combination, Rigid
593	Riding C	-	-	-	-	-	-	-	-	-	-	-	-	-	Combination, Offset
588		-	-	-	-	-	-	-	-	-	-	-	-	-	Spectaclette

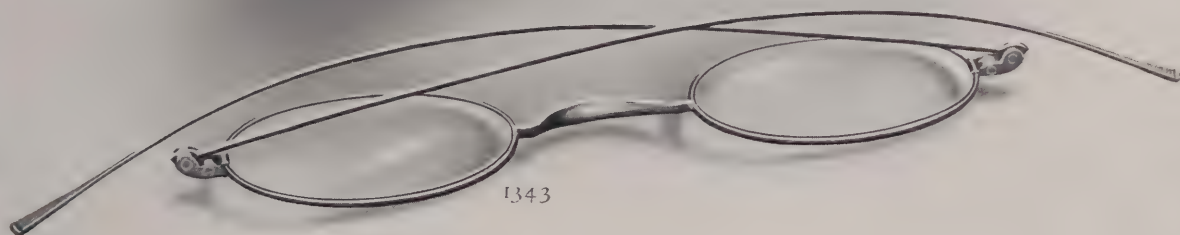
Cork Guards supplied unless otherwise ordered.



1341



1311



1343

ALUMNICO SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

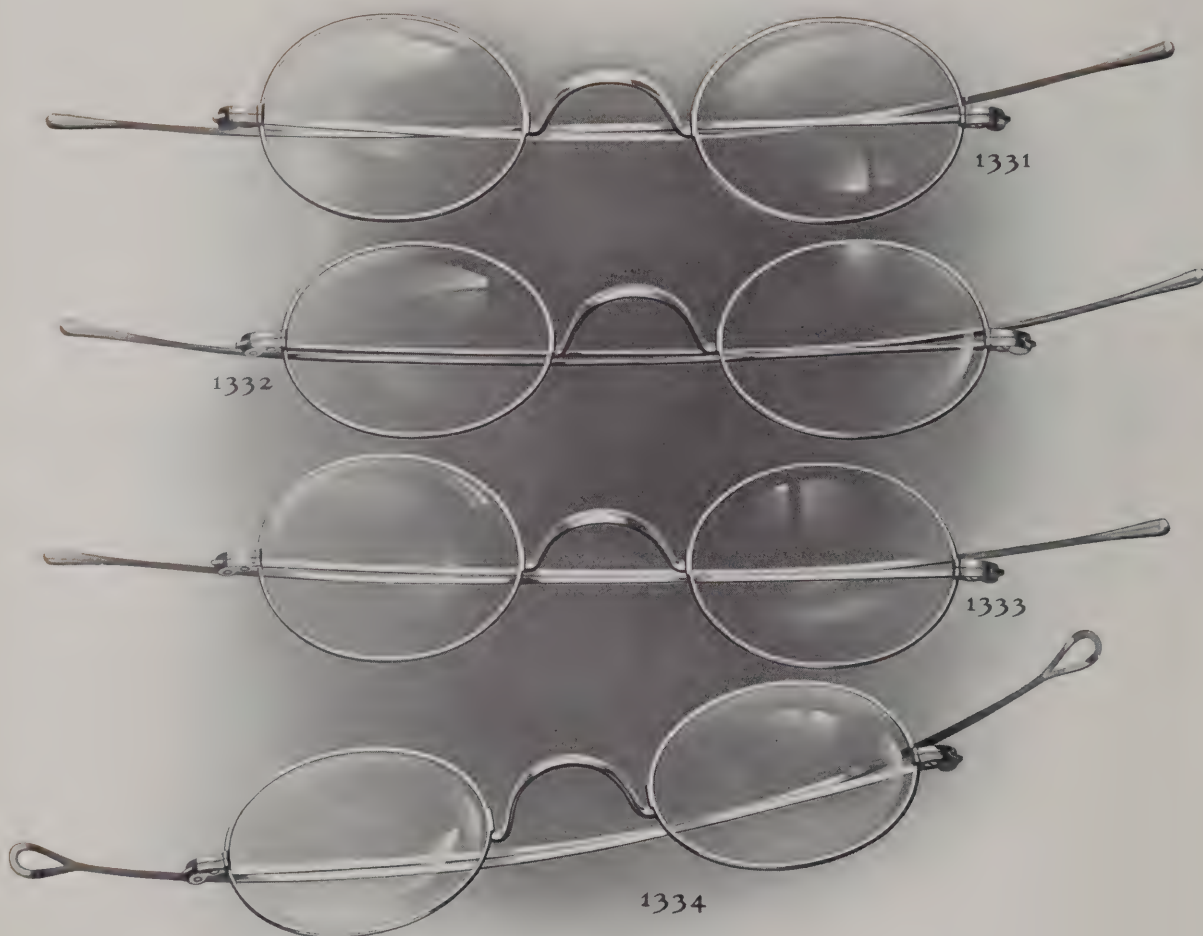
Straight Temple, "C" Bridge

Ogee End Piece Cap Joint	Beveled End Piece Solid Joint	Ogee End Piece Solid Joint	
1301	-	-	Medium, Flat Temple
1311	-	-	Heavy, Flat Temple
1302	-	-	Medium, Round Temple
1303	-	-	Medium, Half-round Temple
1313	-	-	Heavy, Half-round Temple
Beveled End Piece Solid Joint	Beveled End Piece Swaged Cap Joint		
	1341*	-	Fine Quality, Extra Finish
1343	-	-	Medium, Flat Temple
	1344*	-	Medium, Half-round Temple
			Medium, Half-round Temple, Open Tip

See page 91 for description of metal ALUMNICO.

Above Frames supplied in regular AOCo Assortment of "C" Bridges. See page 37.

*Nos. 1341 and 1344 are patented stiffened construction.



ALUMNICO SPECTACLE FRAMES.—PATENTED STYLES

CATALOGUE NUMBER

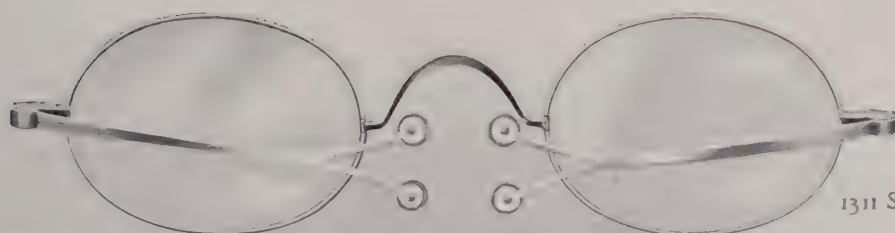
DESCRIPTION

Straight Temple, "SS" Bridge

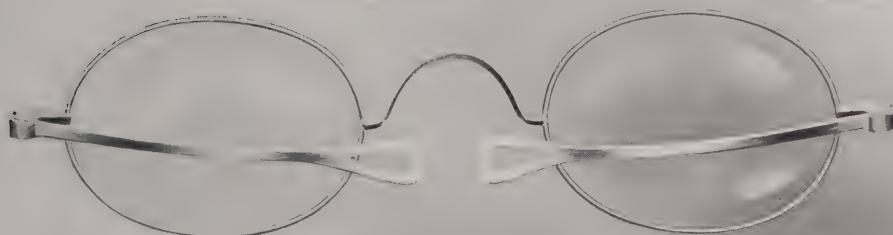
Beveled End Piece
Solid Joint

Medium Weight, Extra Finish, Stiffened

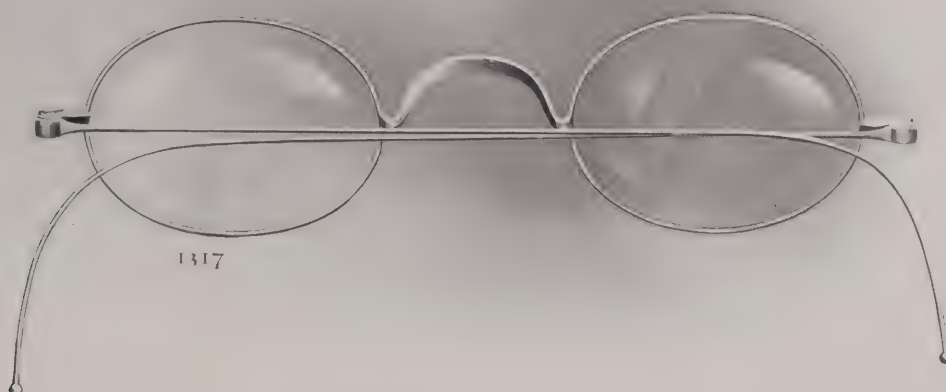
1331	-	-	-	-	-	-	-	-	-	-	-	Flat Temple
1332	-	-	-	-	-	-	-	-	-	-	-	Round Temple
1333	-	-	-	-	-	-	-	-	-	-	-	Half-round Temple
1334	-	-	-	-	-	-	-	-	-	-	-	Half-round Temple, Open Tip
1353	-	-	-	-	-	-	-	-	-	-	-	Half-round Temple, Flush Bridge



1311 Short P T



1311 Short O T



1317

ALUMNICO SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Short Temple, "C" Bridge

Ogee End Piece
Cap Joint

1311 Short P.T.

1311 Short O.T.

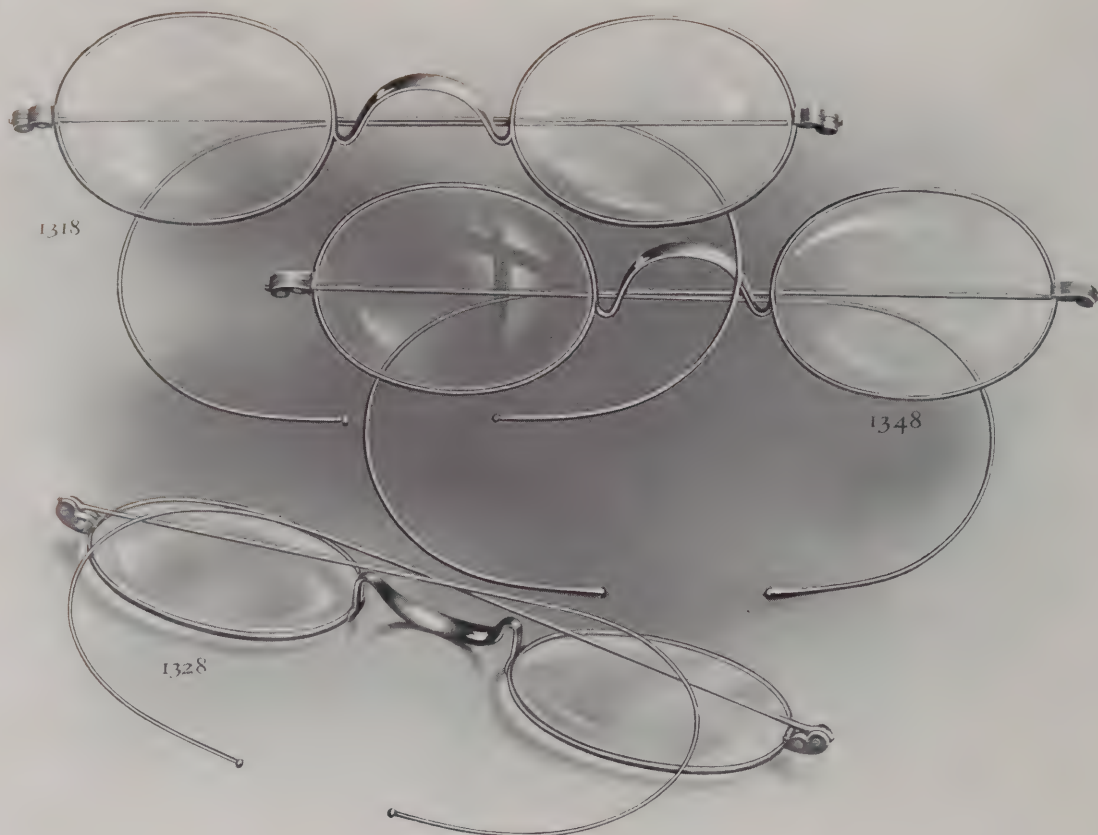
- Heavy, Padded Tip
- Heavy, Open Tip

Half-riding Temple, "SS" Bridge

1327

1317

- Light
- Medium



ALUMNICO SPECTACLE FRAMES

CATALOGUE NUMBER

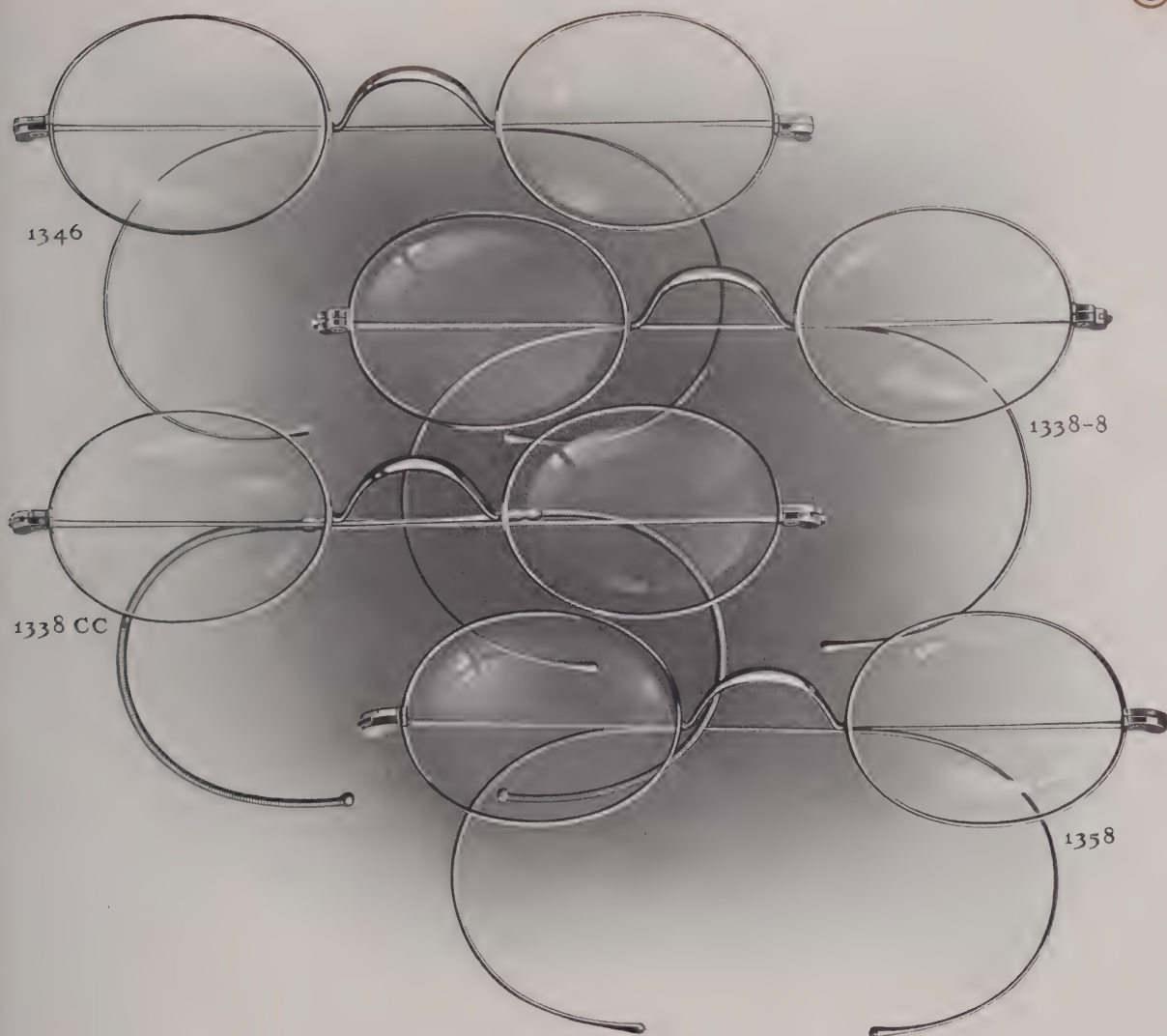
DESCRIPTION

Riding Temple

Beveled End Piece Cap Joint	Ogee End Piece Cap Joint	Beveled End Piece Solid Joint	Ogee End Piece Solid Joint						
1306	-	-	-	-	-	-	-	-	Light
1326	-	-	-	-	-	-	-	-	Medium
1316	-	-	-	-	-	-	-	-	
		1328	-	-	-	-	-	-	
			1308	-	-	-	-	-	Fine Quality, Extra Finish
			1318	-	-	-	-	-	Medium, Pear Tip
				-	-	-	-	-	Extra Heavy
		1348	-	-	-	-	-	-	
		1348 3/4	-	-	-	-	-	-	

Cable Temple

1306 C	-	-	-	-	-	-	-	-	Light
1326 C	-	-	-	-	-	-	-	-	Medium
1316 C	-	-	-	-	-	-	-	-	
		1328 C	-	-	-	-	-	-	
			1308 C	-	-	-	-	-	Fine Quality, Extra Finish
			1318 C	-	-	-	-	-	Medium
				-	-	-	-	-	Extra Heavy
				-	-	-	-	-	
		1348 C	-	-	-	-	-	-	
		1348 3/4 C	-	-	-	-	-	-	



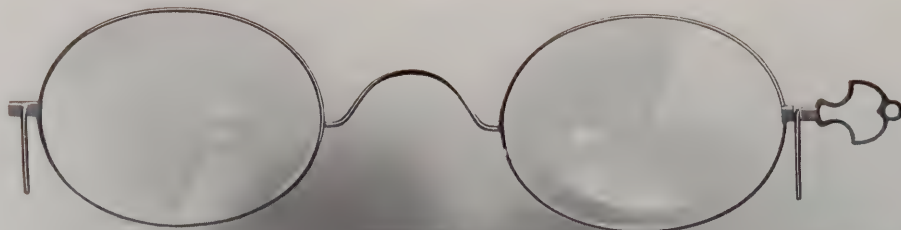
ALUMNICO SPECTACLE FRAMES.—PATENTED STYLES

CATALOGUE NUMBER

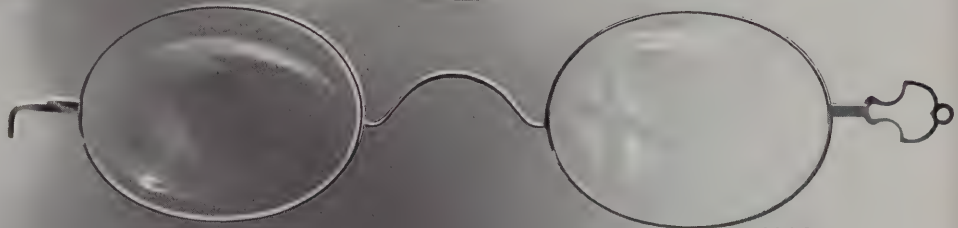
DESCRIPTION

Riding Temple										Extra Finish, Stiffened Medium, "T" Foot Bridge Medium, Flush Bridge
Beveled End Piece Solid Joint			Ogee End Piece Solid Joint			Beveled End Piece Swaged Cap Joint				
1338	-	-	-	1338.8	-	-	-	1346	-	
1358	-	-	-	1358.8	-	-	-	1350	-	
Cable Temple										
1338 C	-	-	-	1338.8 C	-	-	-	1346 C	-	Medium, "T" Foot Bridge
1358 C	-	-	-	1358.8 C	-	-	-	1356 C	-	Medium, Flush Bridge

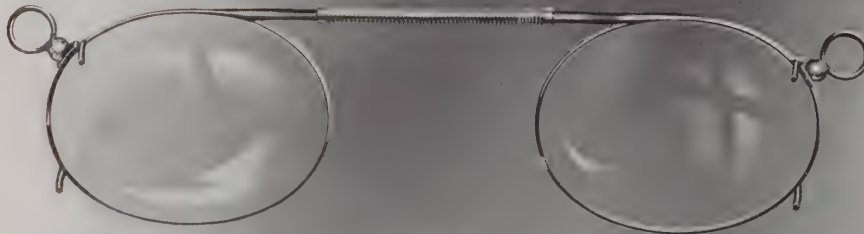
Nos. 1338 and 1358 regularly supplied with flat butt Pear Tip Temples.
For Comfort Cable Temples, add CC to catalogue number, as No. 1338 CC



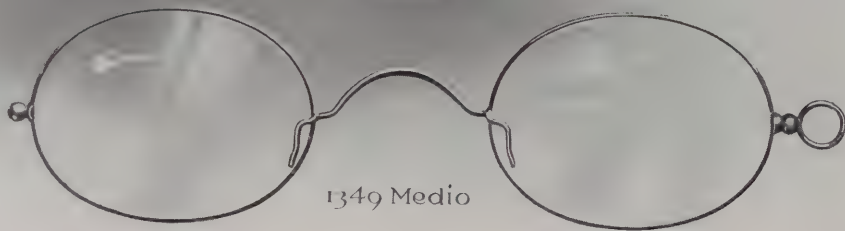
1319



1329



1339



1349 Medio

ALUMNICO GRAB FRONT FRAMES

CATALOGUE NUMBER				DESCRIPTION			
Oval Wire Bridge	Oval Wire Bridge	Rigid Bar Spring	"AA" Bar Spring				
1319	1329	1339	1339 AA	-	-	-	Medium
1319 Ex.	-	-	-	-	-	-	Medium, Ball End Piece, Ball Pear Handle, Extra Finish

ALUMNICO MEDIO GRAB FRONT FRAMES.—PATENTED

CATALOGUE NUMBER				DESCRIPTION			
For "SS" Bridge				For "C" Bridge			Round Wire Bridge
1349 Medio	-	-	-	1359 Medio	-	-	Medium

No. 1319 Eyes only with two hooks on each eye, furnished when so ordered.
No. 1329 style, sometimes called Grab Back.



ALUMNICO EYEGLASS FRAMES

CATALOGUE NUMBER

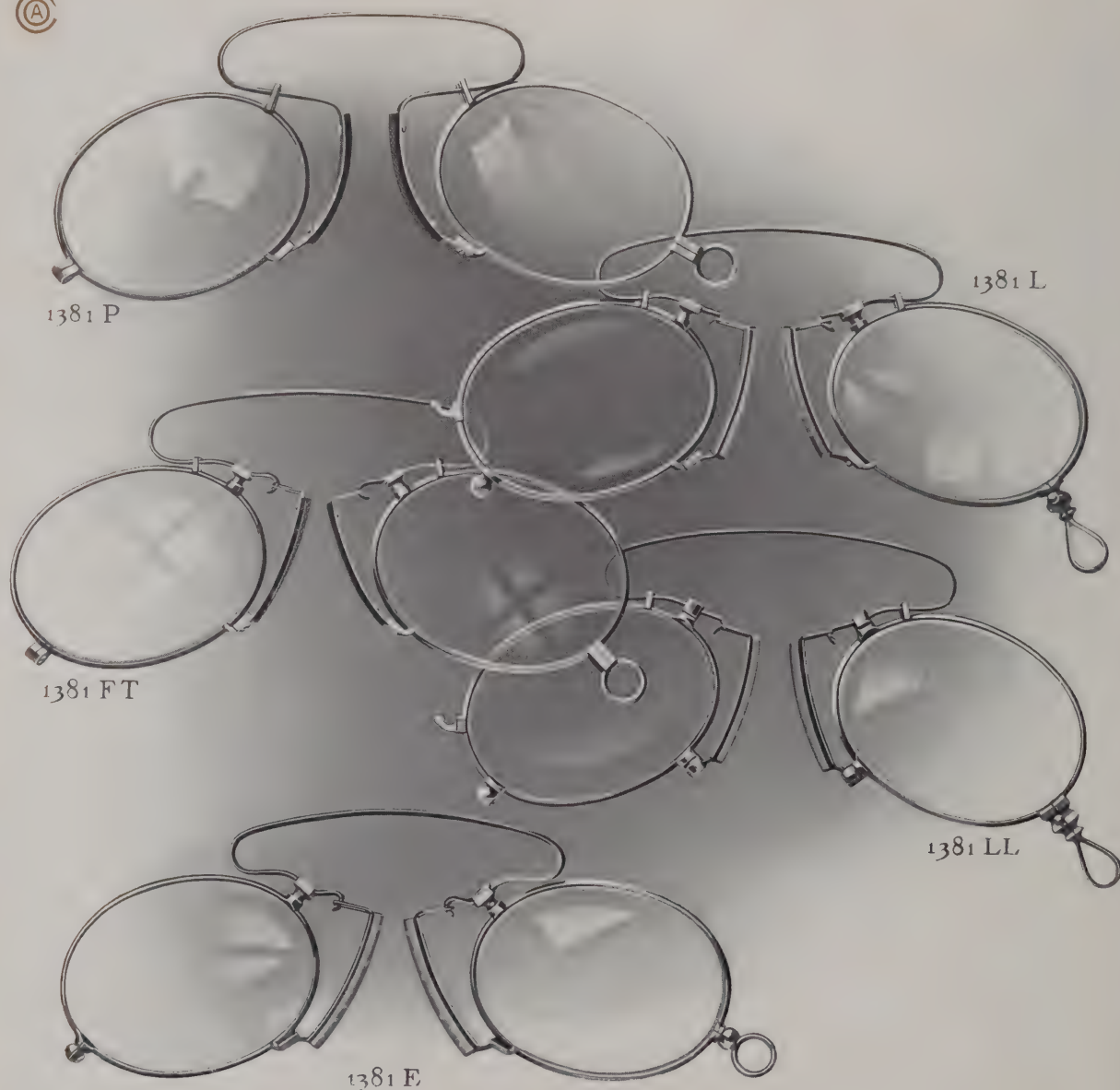
DESCRIPTION

Ring Handle												
Catalogue Number	1	2	3	4	5	6	7	8	9	0	1	
1361	-	-	-	-	-	-	-	-	-	-	-	Rigid
1362	-	-	-	-	-	-	-	-	-	-	-	Long Offset
1363	-	-	-	-	-	-	-	-	-	-	-	Offset
1371	-	-	-	-	-	-	-	-	-	-	-	Double Adjustable
1373	-	-	-	-	-	-	-	-	-	-	-	Double Adjustable Offset
1380	-	-	-	-	-	-	-	-	-	-	-	Solid Adjustable
1381	-	-	-	-	-	-	-	-	-	-	-	Adjustable
1383	-	-	-	-	-	-	-	-	-	-	-	Adjustable Offset

Extra Finish, Ball Ring Handle, Ball Left Joint

Extra Finish, Ball Ring Handle, Ball Left Joint												
Catalogue Number	1	2	3	4	5	6	7	8	9	0	1	
1366	-	-	-	-	-	-	-	-	-	-	-	Rigid
1367	-	-	-	-	-	-	-	-	-	-	-	Offset
1386	-	-	-	-	-	-	-	-	-	-	-	Adjustable
1387	-	-	-	-	-	-	-	-	-	-	-	Adjustable Offset

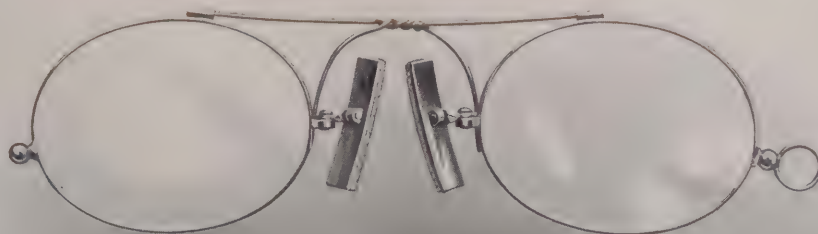
Cork Guards supplied unless otherwise ordered.



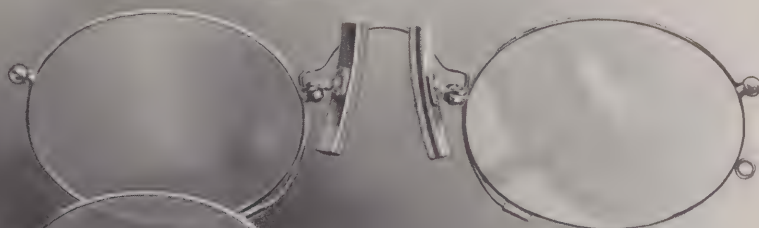
ALUMINICO EYEGLASS FRAMES. EUROPEAN STYLE

CATALOGUE NUMBER				DESCRIPTION			
French Style 70 mm. tied spring	English Style 63 mm. tied spring	English Style 80 mm. tied springs	Perfection Style 140 mm. tied springs	Adjustable			
1381 F.T.	-	1381 E	1381 L	1381 P	-	-	Good Quality
-	-	-	1381 LL	-	-	-	Fine Quality
1383 F.T.	-	1383 E	1383 L	1383 P	-	-	Good Quality
-	-	-	1383 LL	-	-	-	Fine Quality

Nos. 1381 L, 1381 LL, 1381 LL and 1383 LL regularly supplied with Catch and Pin.



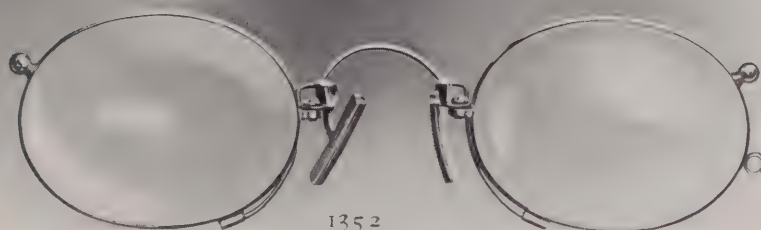
1355 R



1357 S



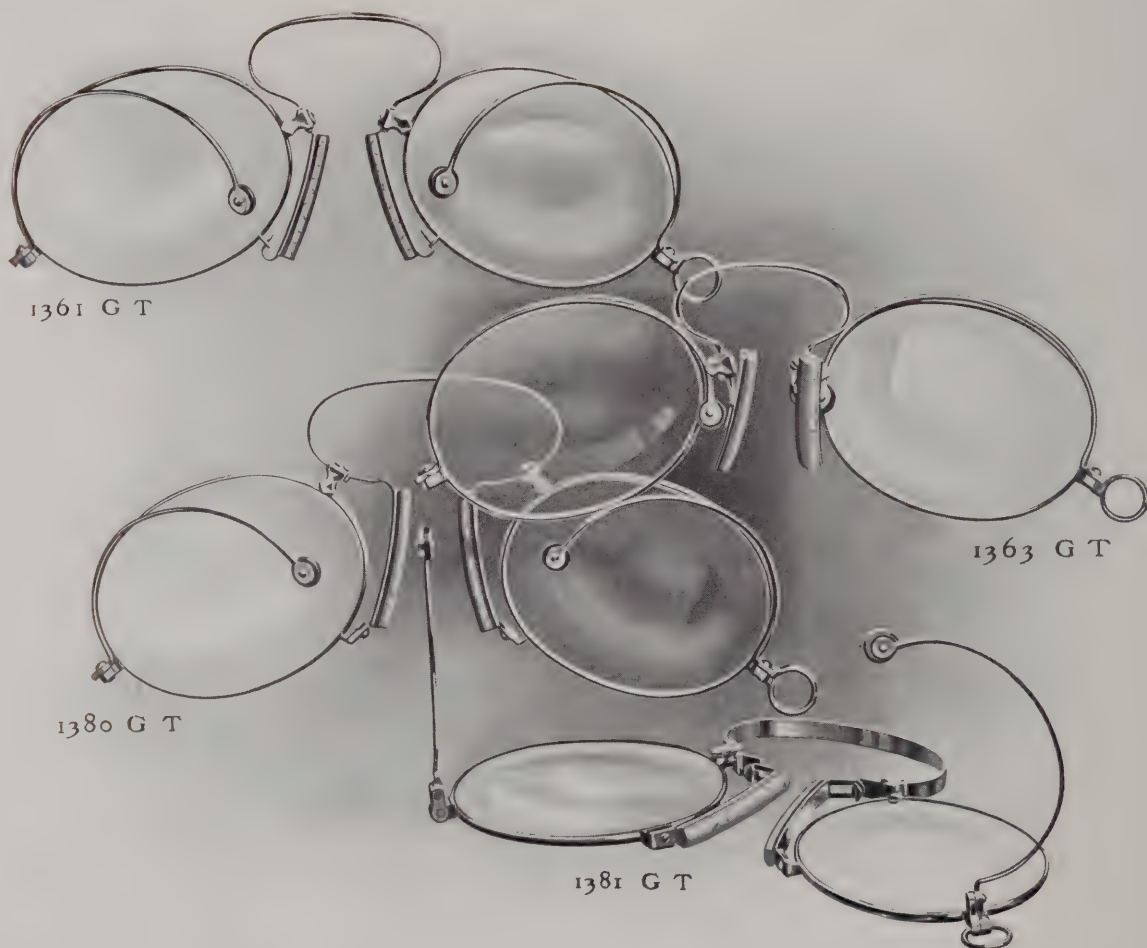
1357 R



1352

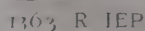
ALUMNICO BAR SPRING EYEGLASS FRAMES

CATALOGUE NUMBER										DESCRIPTION								
"AA"				"D"				"F"				Ring Handle, Medium Weight						
1363	AA	-	-	-	-	1363	D	-	-	-	-	1363	F	-	-	-	-	Offset
Extra Finish																		
1367	AA	-	-	-	-	1367	D	-	-	-	-	1367	F	-	-	-	-	Offset
"Astig" or Rigid Bar Spring, Ring for Cord, Rocking Offset Guards																		
Round Bar		Oval Bar				Flat Bar				Triple Bar								
		1375 L																
13533	-	-				1375	-	-					-	-	-	-	-	Light
		1375				1376				1377								

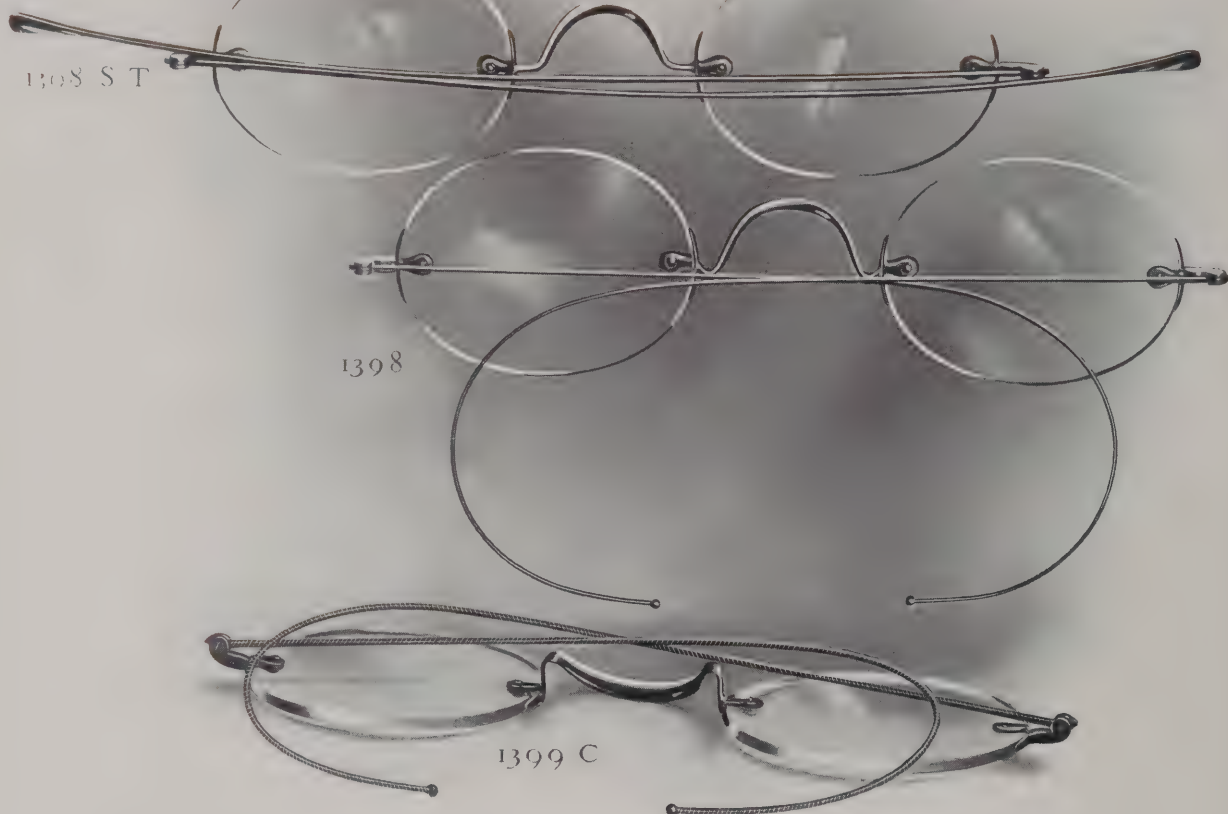


ALUMNICO EYEGLASS FRAMES—GRAB TEMPLE

Cork Guards supplied unless otherwise ordered.
Temples on above Frames are regularly made with Zylonite Pads.

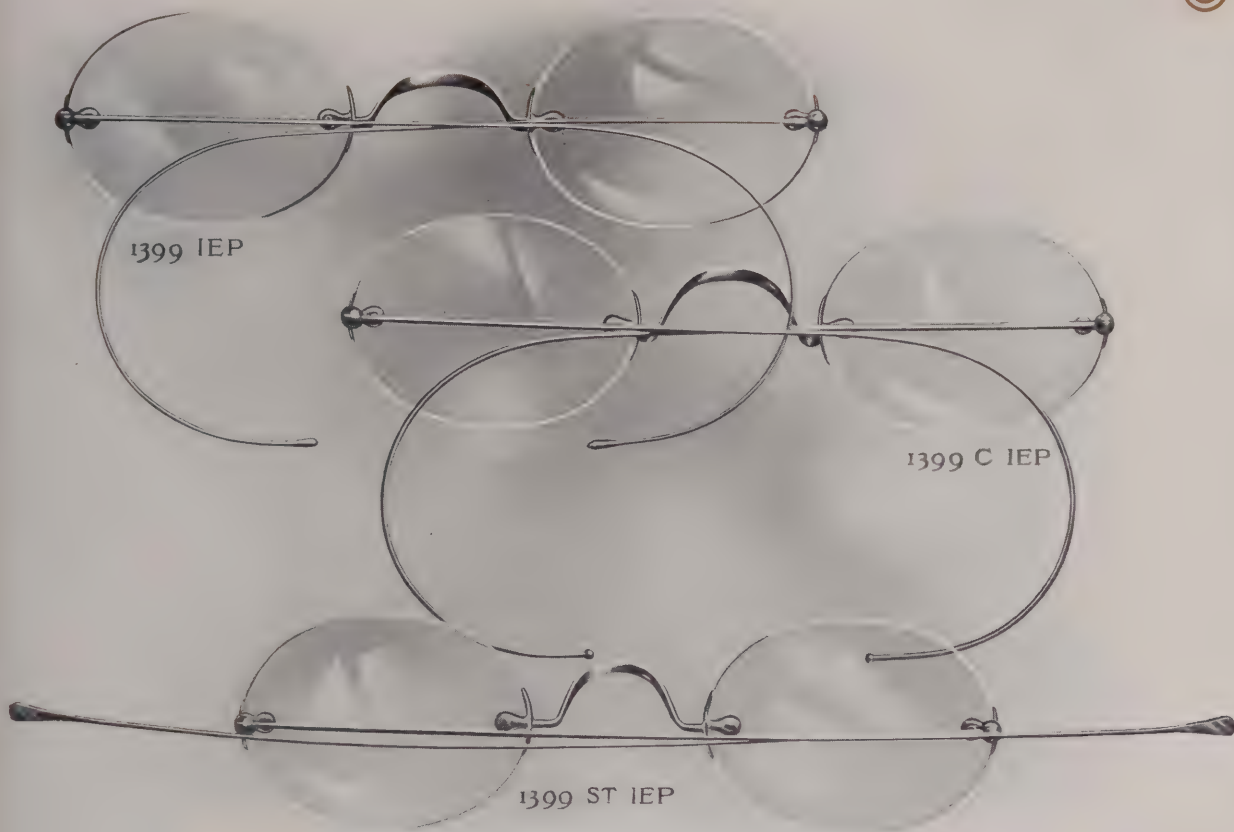


DESCRIPTION



ALUMNICO SPECTACLE MOUNTINGS

CATALOGUE NUMBER	DESCRIPTION
	Straight Temple, "C" Bridge
Rounded End Piece Solid Joint	
1398 S.T. - - - - -	Medium, Half-round Temple
	Riding Temple, "SS" Bridge
1398 - - - - -	Medium
	Cable Temple, "SS" Bridge
1398 C - - - - -	Medium
	Straight Temple, "C" Bridge, Extra Finish
Beveled End Piece Solid Joint	
1399 S.T. - - - - -	Medium, Half-round Temple
	Riding Temple, "SS" Bridge, Extra Finish, Pear Tip
1399 - - - - -	Medium
	Cable Temple, "SS" Bridge, Extra Finish
1399 C - - - - -	Medium



ALUMNICO SPECTACLE MOUNTINGS

CATALOGUE NUMBER	DESCRIPTION
Patented Invisible End Piece Solid Joint	Straight Temple, "C" Bridge
1399 S.T. I.E.P. - - - - -	Medium, Half-round Temple
1399 I.E.P. - - - - -	Riding Temple, "SS" Bridge
	Medium
1399 C I.E.P. - - - - -	Cable Temple, "SS" Bridge
	Medium

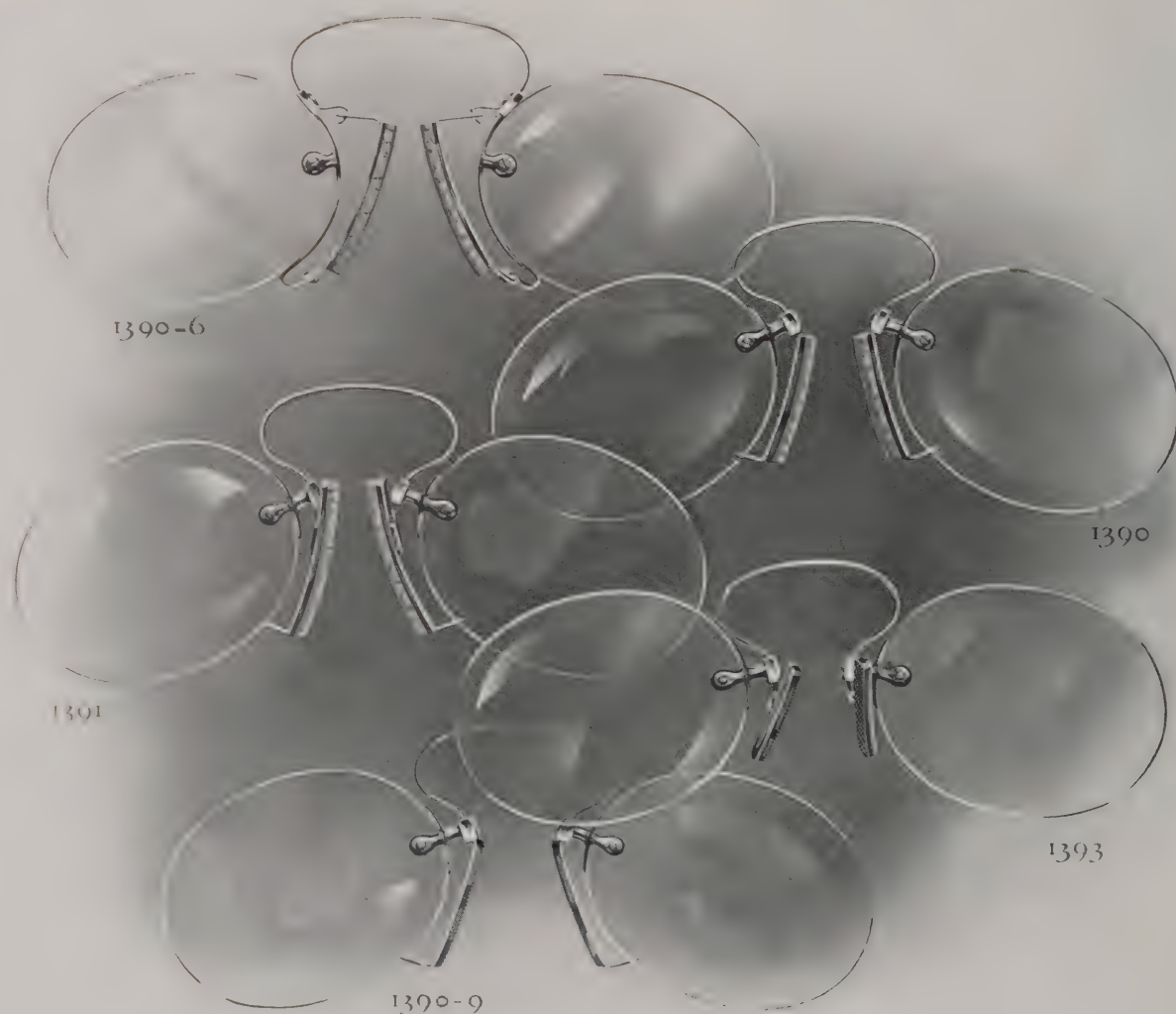
ALUMNICO GRAB FRONT MOUNTINGS

CATALOGUE NUMBER	DESCRIPTION
1319.9 - - - - -	Oval Wire Bridge, with Handle and Hooks
1329.9 - - - - -	Medium

ALUMNICO MEDIO GRAB FRONT MOUNTINGS.—PATENTED

CATALOGUE NUMBER	DESCRIPTION
For "SS" Bridge 1349.9 - - - - -	For "C" Bridge 1359.9 - - - - -
	Oval Wire Bridge, no Handle
	Medium

No. 1329.9 style, sometimes called Grab Back. See No. 1329, page 118.



ALUMNICO EYEGLASS MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

										Medium Weight
1390	-	-	-	-	-	-	-	-	-	Rigid
1391	-	-	-	-	-	-	-	-	-	Long Offset
1393	-	-	-	-	-	-	-	-	-	Offset
1393 C.S.S.	-	-	-	-	-	-	-	-	-	Offset, Extra Finish, Countersunk Stud Screw
1390.6	-	-	-	-	-	-	-	-	-	Adjustable
1390.7	-	-	-	-	-	-	-	-	-	Adjustable Offset
1390.9	-	-	-	-	-	-	-	-	-	Rigid, Extra Finish, Countersunk Stud Screw, Zylonite

Cork Guards supplied unless otherwise ordered, except No. 1390.9, which are Zylonite only.



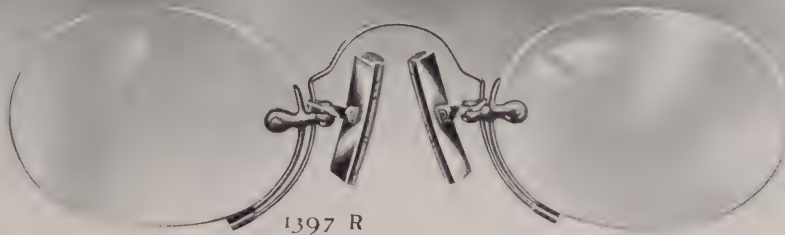
1390 AA



1393 AA



1393 D



1397 R

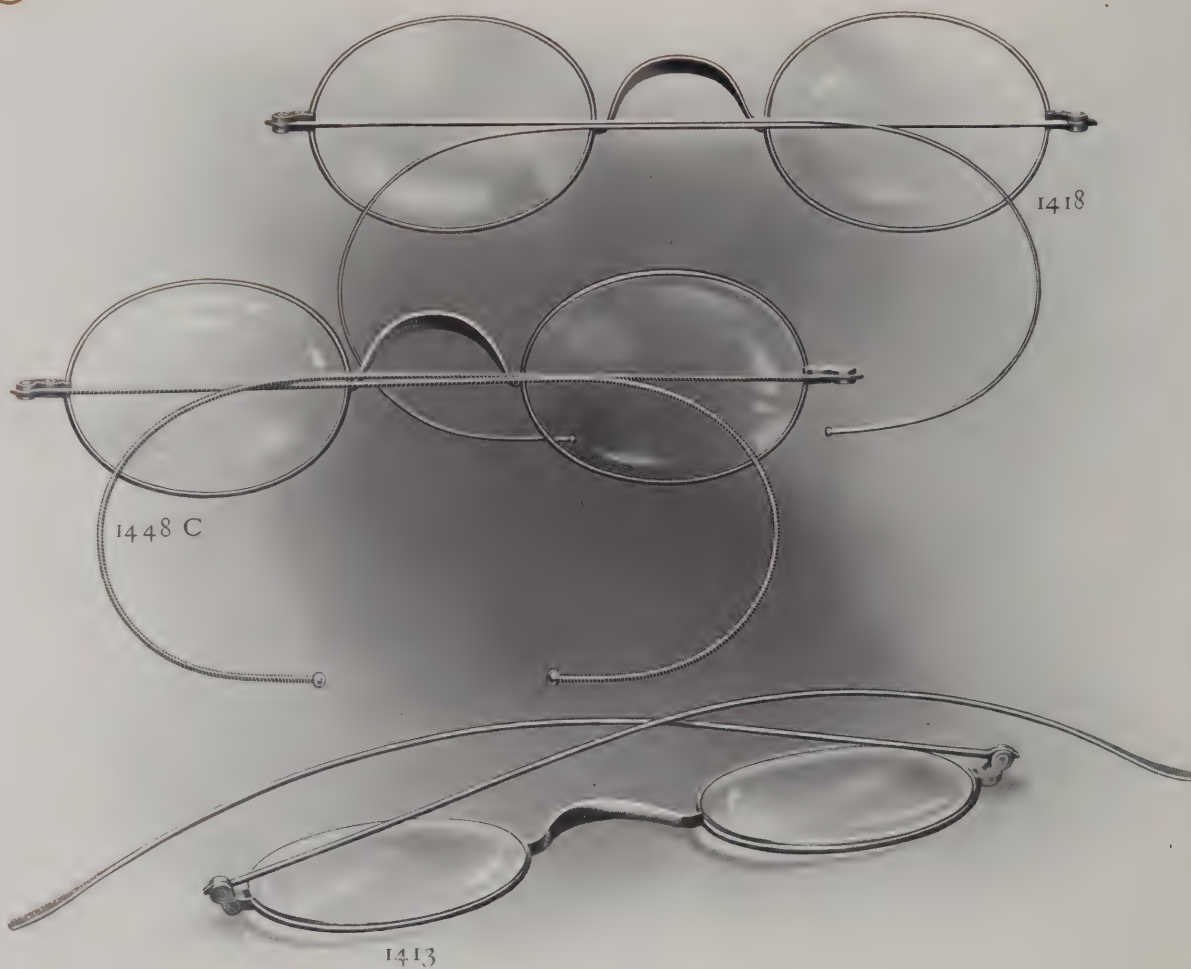
ALUMNICO BAR SPRING EYEGLASS MOUNTINGS

CATALOGUE NUMBER				DESCRIPTION
"A"	"AA"	"D"	"F"	Medium Weight
1390 A	1390 AA	1390 D	1390 F	Rigid
1393 A	1393 AA	1393 D	1390 F	Offset

ALUMNICO REVLUC EYEGLASS MOUNTINGS

CATALOGUE NUMBER		DESCRIPTION
Rocking	Solid	
1397 R	1397 S	Medium

Cork Guards supplied unless otherwise ordered.



ALUMNICA SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Solid Joint

Straight Temple, "C" Bridge

1413	-	-	-	-	-	-	-	-	-	-	Medium, Half-round Temple, Ogee End Piece
1443	-	-	-	-	-	-	-	-	-	-	Medium, Half-round Temple, Beveled End Piece

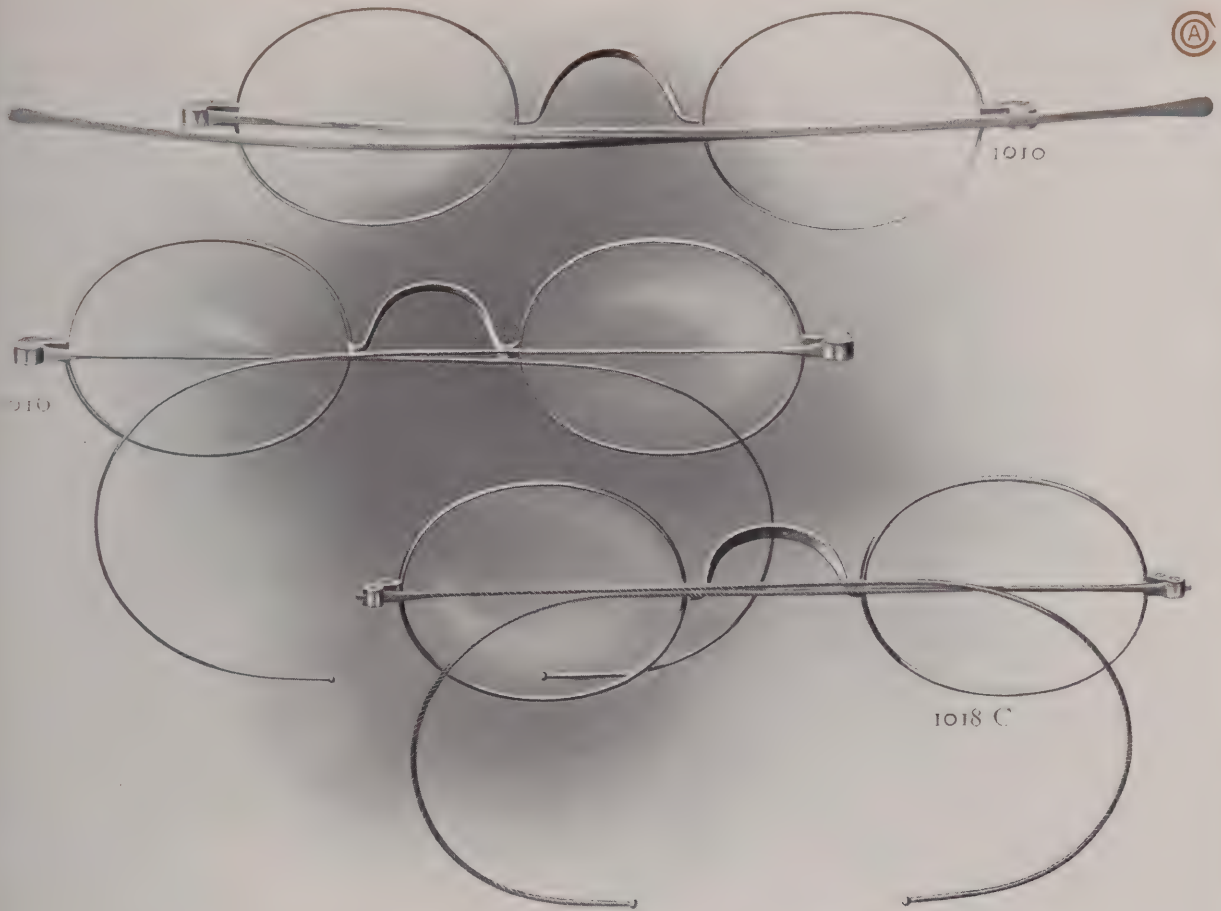
Riding Temple, "SS" Bridge

1418	-	-	-	-	-	-	-	-	-	-	Medium, Ogee End Piece
1448	-	-	-	-	-	-	-	-	-	-	Medium, Beveled End Piece
1448 $\frac{3}{4}$	-	-	-	-	-	-	-	-	-	-	Extra Heavy, Beveled End Piece

Cable Temple, "SS" Bridge

1418 C	-	-	-	-	-	-	-	-	-	-	Medium, Ogee End Piece
1448 C	-	-	-	-	-	-	-	-	-	-	Medium, Beveled End Piece
1448 $\frac{3}{4}$ C	-	-	-	-	-	-	-	-	-	-	Extra Heavy, Beveled End Piece

See page 93 for description of metal ALUMNICA.



GERMAN SILVER SPECTACLE FRAMES

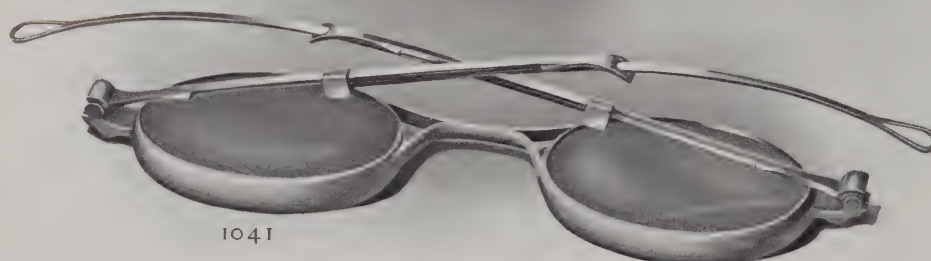
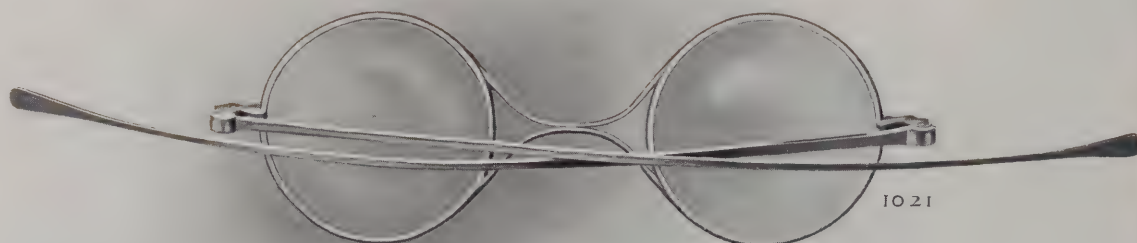
CATALOGUE NUMBER										DESCRIPTION
Straight Temple										
Rounded End Piece Cap Joint										
1000	-	-	-	-	-	-	-	-	-	Medium Quality, Flat Eyewire, Flat Temple
1001	-	-	-	-	-	-	-	-	-	Medium Quality, Flat Temple
1010	-	-	-	-	-	-	-	-	-	Good Quality, Flat Eyewire, Flat Temple
1011	-	-	-	-	-	-	-	-	-	Good Quality, Flat Temple
					1004	-	-	-	-	Ordinary Quality, Flat Eyewire, Flat Temple
					1005	-	-	-	-	Ordinary Quality, Flat Temple
1013	-	-	-	-	-	-	-	-	-	Good Quality, Half-round Temple
Half-riding Temple										
1007	-	-	-	-	-	-	-	-	-	Medium Quality
1017	-	-	-	-	-	-	-	-	-	Good Quality
Riding Temple										
					1006	-	-	-	-	Ordinary Quality
Ogee End Piece Solid Joint										
					1008	-	-	-	-	Medium Quality
1016	-	-	-	-	1018	-	-	-	-	Good Quality
Cable Temple										
					1008 C	-	-	-	-	Medium Quality
1016 C	-	-	-	-	1018 C	-	-	-	-	Good Quality

All above Frames have Oval Eyewire except Nos. 1000, 1004 and 1010.

Nos. 1000, 1001, 1004 and 1005 supplied in AOCo B.C. Assortment of "C" Bridges. See page 37.

Nos. 1006, 1007 and 1008 supplied in AOCo B Assortment of "SS" Bridges. See page 37.

See No. 308, page 98 for style of special End Piece used on Nos. 1104, 1105 and 1106.



GERMAN SILVER SMELTERS' AND BESSEMER SPECTACLE FRAMES

CATALOGUE NUMBER				DESCRIPTION			
Cap Joint Heavy				Cap Joint Extra Heavy			Nickel-plated
1021	-	-	-	1031	-	-	Smelters', Round Eye, "X" Bridge, Flat Straight Temples
				1041	-	-	Bessemer, Oval Eye, "K" Bridge, Band Slide Temples

Above Frames supplied with either "X" or "K" Bridge, as ordered.

Nos. 1021 and 1031 supplied with Loop Slide or Band Slide Temples when so ordered.

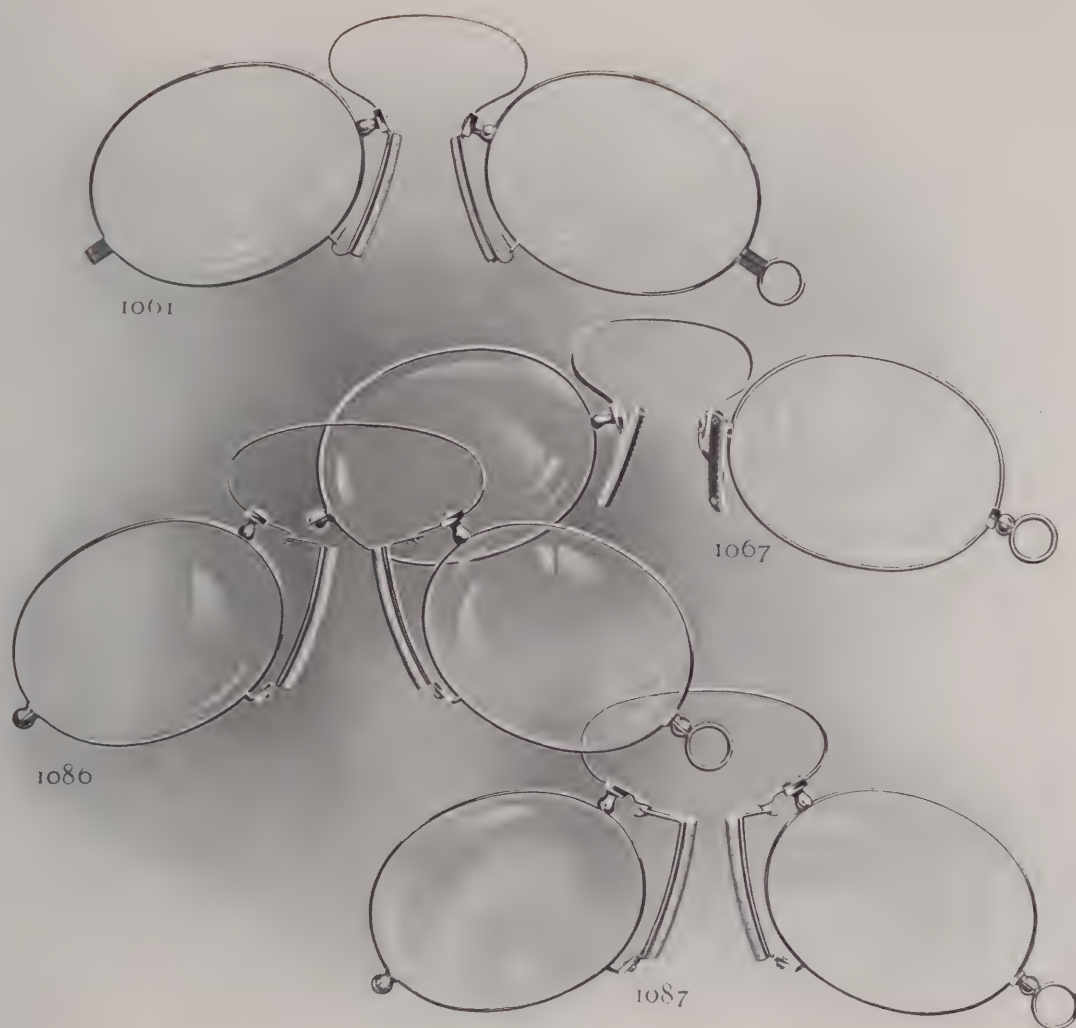
Smelters' Frames fitted with Plano Secons. Blue Lenses, shade as ordered.

Bessemer Frames fitted with Lenses (three colors combined) when so ordered.

GERMAN SILVER CHINESE STYLE SPECTACLE FRAMES

CATALOGUE NUMBER				DESCRIPTION			
				Straight Temple			
Cap Joint							Nickel-plated
1053 Z	-	-	-	-	-	-	"Z" Bridge
1053 RR	-	-	-	-	-	-	"RR" Bridge
				Riding Temple			
1056 Z	-	-	-	-	-	-	"Z" Bridge
				Cable Temple			
1056 C.Z.	-	-	-	-	-	-	"Z" Bridge

For illustrations of Chinese styles, see page 133.

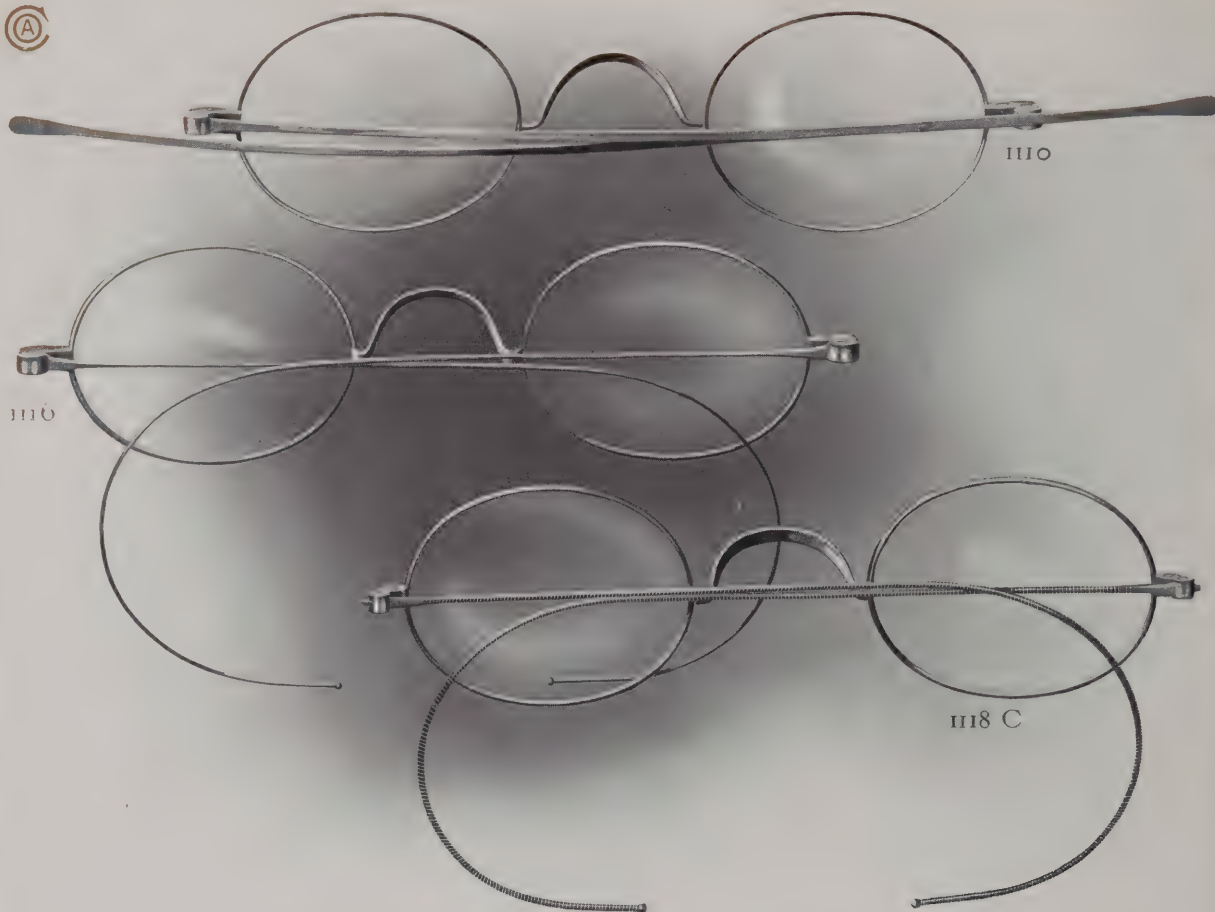


GERMAN SILVER EYEGLASS FRAMES

CATALOGUE NUMBER													DESCRIPTION	
Medium Quality Ring Handle				Good Quality Ring Handle				Fine Quality Ball Ring Handle, Ball Left Joint					Nickel-plated	
1061½	-	-	-	-	1061	-	-	-	-	1066	-	-	-	Rigid
1063½	-	-	-	-	1063	-	-	-	-	1067	-	-	-	Offset
1081½	-	-	-	-	1081	-	-	-	-	1086	-	-	-	Adjustable
1083½	-	-	-	-	1083	-	-	-	-	1087	-	-	-	Adjustable Offset

Cork Guards supplied unless otherwise ordered.

Loop Handle supplied on above Frames when so ordered, see illustration of Handle, No. 7 H, Material Section.



ROMAN ALLOY SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

Straight Temple									
Rounded End Piece Cap Joint		Special End Piece Solid Joint							
1100	-	-	-	-	-	-	-	-	Medium Quality, Flat Eyewire, Flat Temple
1101	-	-	-	-	-	-	-	-	Medium Quality, Flat Temple
1110	-	-	-	-	-	-	-	-	Good Quality, Flat Eyewire, Flat Temple
1111	-	-	-	-	-	-	-	-	Good Quality, Flat Temple
					1104	-	-	-	Ordinary Quality, Flat Eyewire, Flat Temple
					1105	-	-	-	Ordinary Quality, Flat Temple
1113	-	-	-	-	-	-	-	-	Good Quality, Half-round Temple
Half-riding Temple									
1107	-	-	-	-	-	-	-	-	Medium Quality
1117	-	-	-	-	-	-	-	-	Good Quality
Riding Temple									
					1106	-	-	-	Ordinary Quality
Ogee End Piece Solid Joint									
					1108	-	-	-	Medium Quality
1116	-	-	-	-	1118	-	-	-	Good Quality
Cable Temple									
					1108 C	-	-	-	Medium Quality
					1118 C	-	-	-	Good Quality

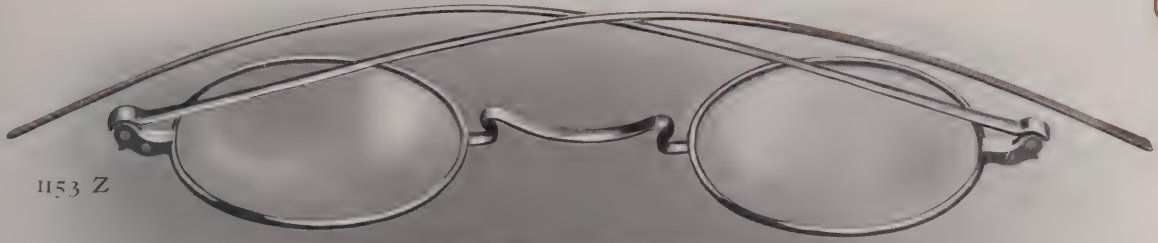
All above Frames have Oval Eyewire except Nos. 1100, 1104 and 1110.

Nos. 1100, 1101, 1104 and 1105 supplied in AOC Co B.C. Assortment of "C" Bridges. See page 37.

Nos. 1107, 1106, 1108 and 1118 supplied in AOC Co B Assortment of "SS" Bridges. See page 37.



1153 Z



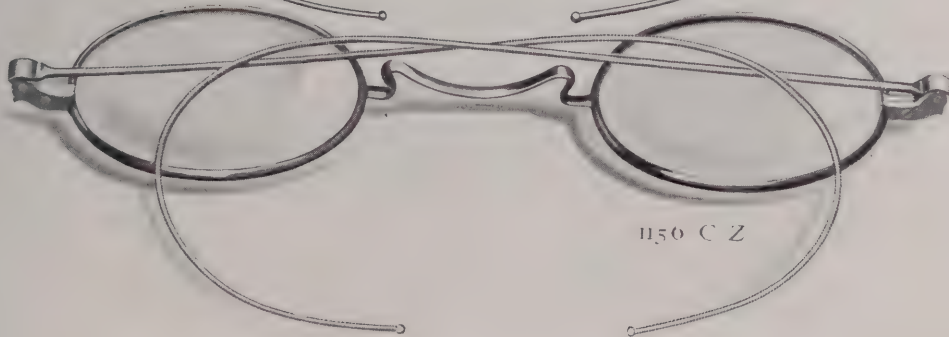
1153 R R



1156 Z



1156 C Z



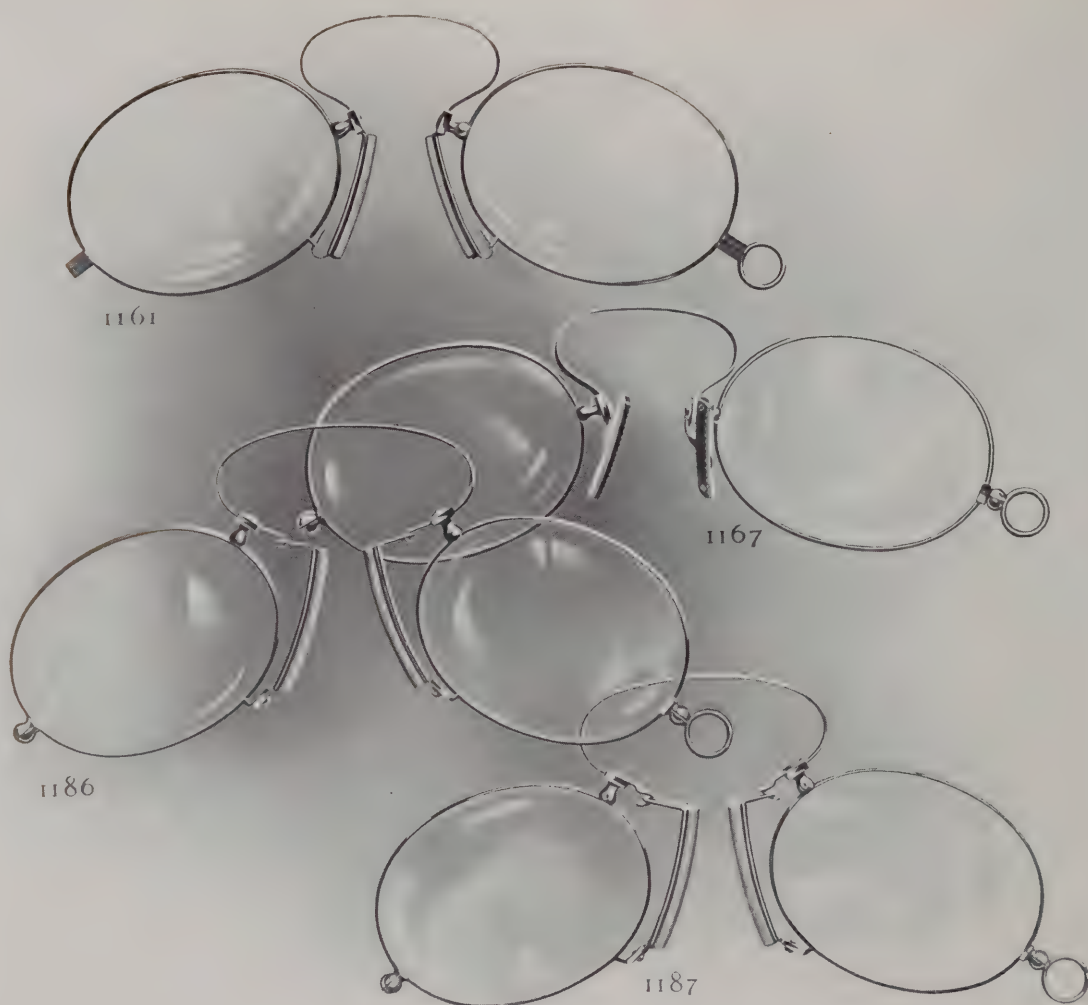
ROMAN ALLOY CHINESE STYLE SPECTACLE FRAMES

CATALOGUE NUMBER

DESCRIPTION

CATALOGUE NUMBER		DESCRIPTION
Cap Joint		Straight Temple
1153 Z	-	Nickel-plated
1153 RR	-	"Z" Bridge
	-	"RR" Bridge
1156 Z	- - - - -	Riding Temple
	- - - - -	"Z" Bridge
1156 C.Z.	- - - - -	Cable Temple
	- - - - -	"Z" Bridge

Above styles supplied also in German Silver. See page 130.



ROMAN ALLOY EYEGLASS FRAMES

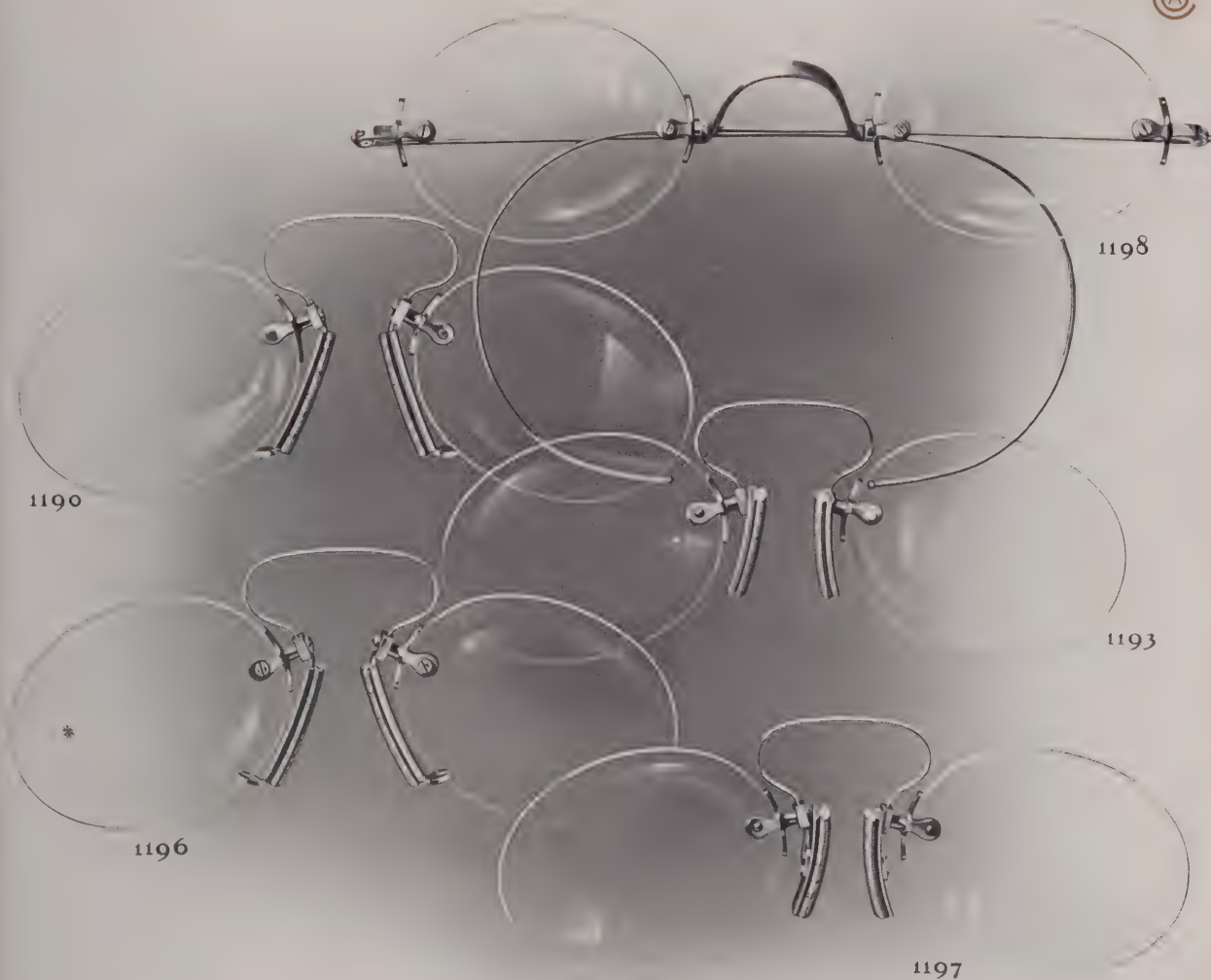
CATALOGUE NUMBER				DESCRIPTION			
Medium Quality Ring Handle		Good Quality Ring Handle		Fine Quality, Ball Ring Handle Ball Left Joint			
1161 1/2	-	1161	-	1166	-	-	Rigid
1163 1/2	-	1163	-	1167	-	-	Offset
1181 1/2	-	1181	-	1186	-	-	Adjustable
1183 1/2	-	1183	-	1187	-	-	Adjustable Offset

ROMAN ALLOY BAR SPRING EYEGLASS FRAMES

CATALOGUE NUMBER				DESCRIPTION			
"AA"				"D"			Ring for Cord, Good Quality
1161 AA	-	-	-	1161 D	-	-	Rigid
1163 AA	-	-	-	1163 D	-	-	Offset

ROMAN ALLOY GRAB FRONT FRAMES

CATALOGUE NUMBER				DESCRIPTION			
Grab Front		Medio Patented For "SS" Bridge		Medio Patented For "C" Bridge			
1119	-	1149	-	1150	-	-	Good Quality, Oval Wire Bridge



ROMAN ALLOY SPECTACLE MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

Rounded End Piece
Solid Joint

Riding Temple

1198

Medium Quality, Flat Strap

ROMAN ALLOY EYEGLASS MOUNTINGS

CATALOGUE NUMBER

DESCRIPTION

1190

Ordinary Quality, Flat Strap

1193

Rigid

Offset, Riveted Construction

1196

Good Quality, Flat Strap

1197

Adjustable

Adjustable Offset

Cork Guards supplied unless otherwise ordered.

Nos. 1190 and 1193 supplied only when fitted with Lenses.

No. 1198 supplied only when fitted with Lenses.



REGALOID SPECTACLE FRAMES

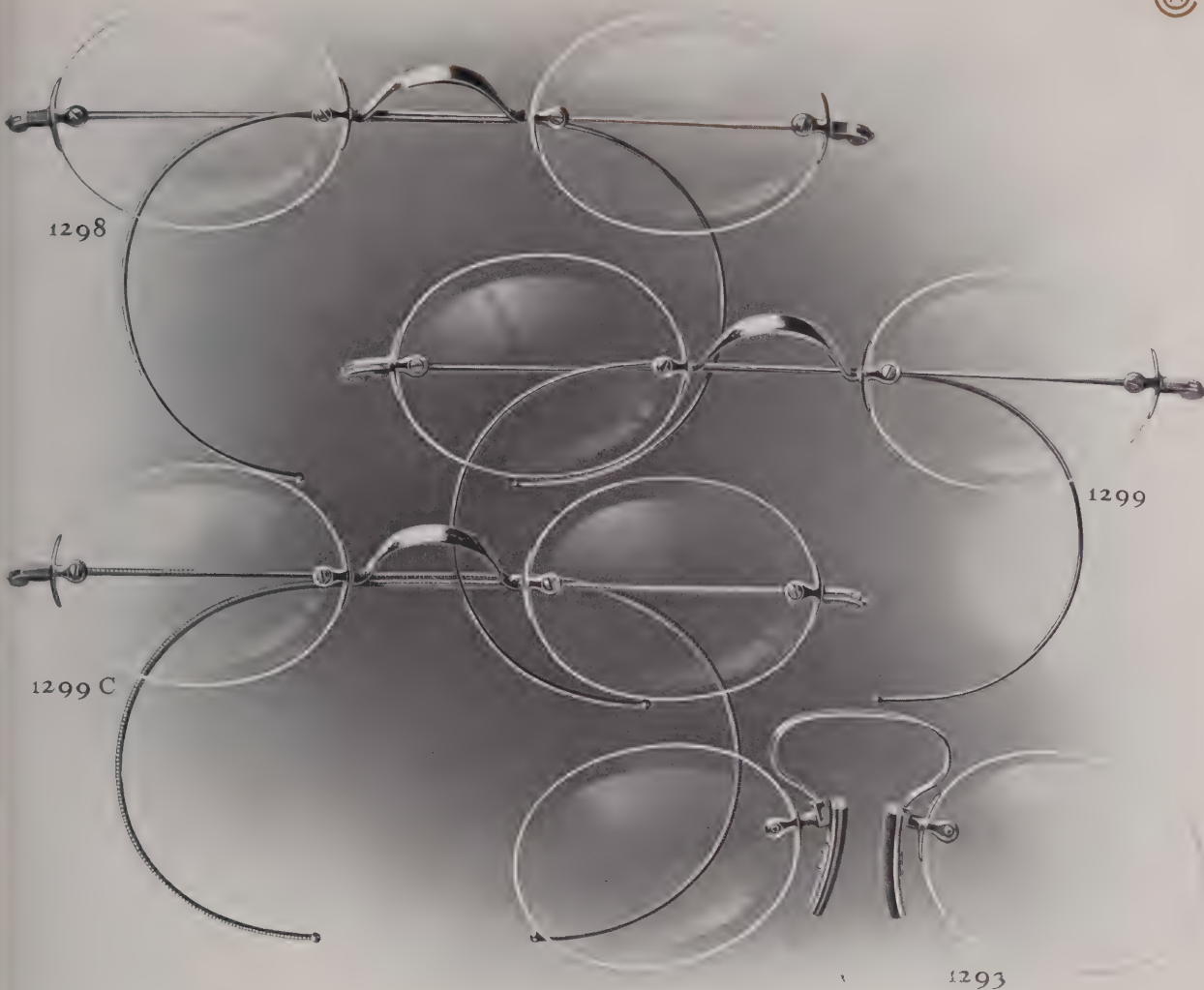
CATALOGUE NUMBER	DESCRIPTION
Beveled End Piece Solid Joint	Straight Temple, "C" Bridge
1243	Extra Finish Fine Quality, Half-round Temple
1247	Half-riding Temple, "SS" Bridge Fine Quality
1248	Riding Temple, "SS" Bridge Fine Quality
1248 C	Cable Temple, "SS" Bridge Fine Quality

REGALOID EYEGLASS FRAMES

CATALOGUE NUMBER	DESCRIPTION
1266	Fine Quality, Extra Finish, Ball Ring Handle Ball Left Joint
1267	Rigid
1286	Offset
1287	Adjustable
	Adjustable Offset

Cork Guards supplied unless otherwise ordered.

REGALOID Frames and Mountings are furnished in individual Anti-tarnish Envelopes. They are made from a special alloy, admitting of a high polish and are the best imitation of Gold Frames made. In color they closely resemble 14k Gold Goods.



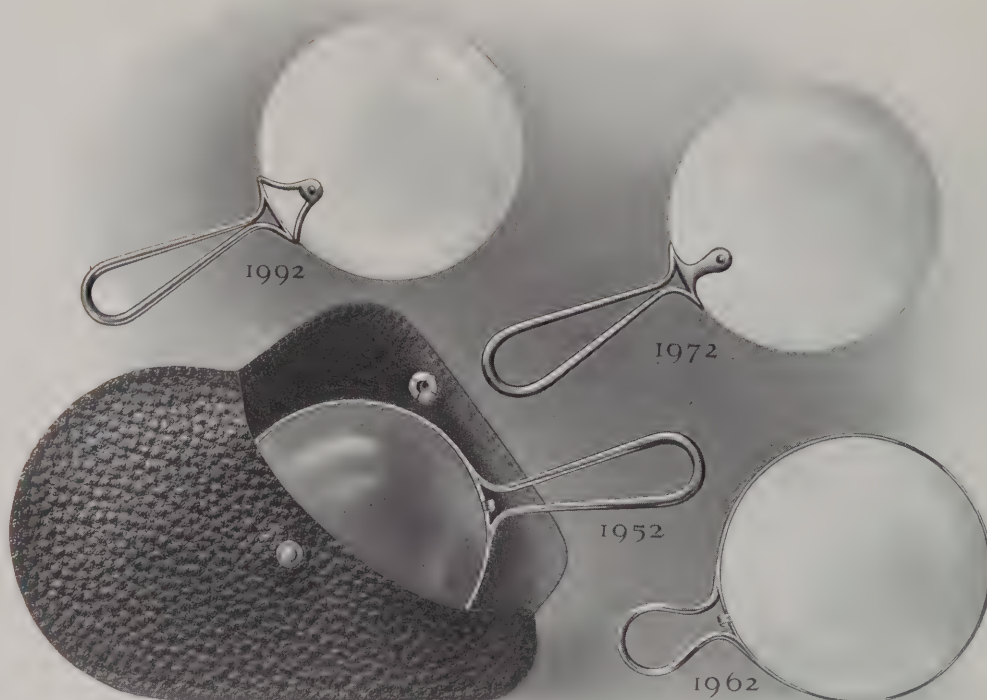
REGALOID SPECTACLE MOUNTINGS

CATALOGUE NUMBER		DESCRIPTION
		Riding Temple, "SS" Bridge
Rounded End Piece Solid Joint	Beveled End Piece Solid Joint	Extra Finish
1298 - -	1299 - -	Fine Quality
		Cable Temple, "SS" Bridge
1298 C - -	1299 C - -	Fine Quality

REGALOID EYEGLASS MOUNTINGS

CATALOGUE NUMBER	DESCRIPTION
1293 - - - - -	Fine Quality, Extra Finish Offset

Cork Guards supplied unless otherwise ordered.



AMOPTISCOPES

GOLD-FILLED, WITH RIMS

Catalogue Number	Diameter	Focus	Style
3952	50 mm.	+10.00	Long handle
3962			Short handle
4952			Folding handle
3952	50 mm.	+13.00	Long handle
3962			Short handle
3952 1/2	63 mm.	+8.00	Long handle
3962 1/2			Short handle
3953	75 mm.	+6.50	Long handle
3963			Short handle

GOLD-FILLED, RIMLESS, Long handle

3972	50 mm.	+10.00	Rimless style strap
3992			Triangular open strap
3972	50 mm.	+13.00	Rimless style strap
3992			Triangular open strap
3972 1/2	63 mm.	+8.00	Rimless style strap
3992 1/2			Triangular open strap
3973	75 mm.	+6.50	Rimless style strap
3993			Triangular open strap

ALUMNICO, WITH RIMS

Catalogue Number	Diameter	Focus	Style
1952	50 mm.	+10.00	Long handle
1962			Short handle
2952			Folding handle
1952	50 mm.	+13.00	Long handle
1962			Short handle
1952 1/2	63 mm.	+8.00	Long handle
1962 1/2			Short handle
1953	75 mm.	+6.50	Long handle
1963			Short handle

ALUMNICO, RIMLESS, Long handle

1972	50 mm.	+10.00	Rimless style strap
1992			Triangular open strap
1972	50 mm.	+13.00	Rimless style strap
1992			Triangular open strap
1972 1/2	63 mm.	+8.00	Rimless style strap
1992 1/2			Triangular open strap
1973	75 mm.	+6.50	Rimless style strap
1993			Triangular open strap

Amoptiscope supplied with Flexible Leather Button Flap Cases, with or without lining as ordered. (State focus wanted in ordering from your wholesaler.)

For Amoptiscope Cases only, see Spectacle Case Section.

Folding Handle Amoptiscope, No. 2952 Alumnico and No. 4952 Gold-filled have handles similar to No. 1952 except hinged. They fold compactly and fit in a small case for pocket use. Made in 50 mm. diameter only.

FINGER-PIECE EYEGLASSES



FINGER-PIECE EYEGLASSES

NO stronger argument can be advanced in favor of a finger-piece eyeglass than that it is simple in construction. This very attribute, simplicity, has given the AOC_o finger-piece eyeglass an enviable popularity among those who recognize the practical advantage of eliminating unnecessary details. The AOC_o construction has simplified the fitting of eyeglasses, reducing the procedure to a mere matter of selection and easy adjustment. The present AOC_o styles represent a refinement of the original form embodying the same basic ideas. The infallible test of long usage has demonstrated the soundness of theory upon which these ideas were developed.



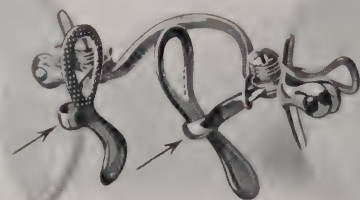
The patented AO-Loop with *rocking* guards

The American Optical Company has been identified with the manufacture of finger-piece eyeglasses ever since the inception of the idea. A complete organization and extensive equipment for producing a product of superior worth, coupled with a manufacturing experience of almost eighty years, is, in itself, sufficient warrant of what may be expected of these wares.

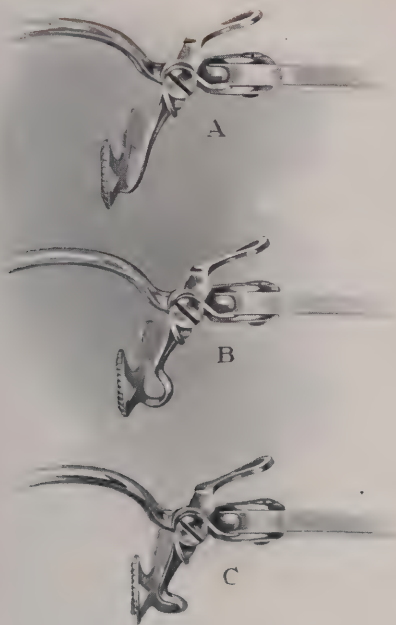
Special Features Numerous special structural features are employed in the manufacture of AOC_o finger-piece eyeglasses which give these goods prominent and in many cases exclusive advantages. The great importance of the AOC_o constructions may be readily appreciated by anyone engaged in fitting eyeglasses. Our complete Patent Department devotes a large part of its work to the study and development of improvements on these goods alone. As a result we have many valuable patents granted and others pending, which enable us to secure for our customers and ourselves the necessary protection against infringement.

The AO-Loop (Patented.) Notable among these structural features is what is generally known in the trade as the AO-Loop. Briefly, this consists of joining the finger-piece arm with the *rear* edge of the guard, the arm passing around outside and forming a loop.

The value of this looped arm structure lies almost entirely in the great latitude which it allows in fitting. To properly fit any finger-piece eyeglass it is necessary that its construction be such as to permit the adjuster to place the guards up or down, in or out, forward or back, as the case may require. It is impossible to make such adjustments with the ordinary type of finger-piece eyeglass wherein the guard is attached to the arm at its forward edge as in Fig. L. The illustrations A to J, inclusive, show graphically some of the many practical adjustments which are made possible with the patented AO-Loop construction. The great importance of this matter can hardly be estimated.



The patented AO-Loop with *rigid* guards
Note that the arm joins the *rear* edge of guard



Adjustments for "depth". A and C are extremes back and forward; B, normal position

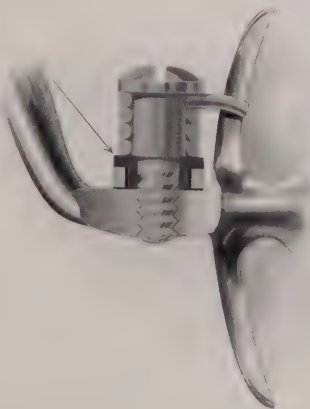
The AO-Washer (Patented.) In assembling the parts of AOC_o finger-piece eyeglasses we employ a tiny washer or bushing (see illustration below), which forms a bearing in which the guard arm may work freely without any tendency either to bind or loosen the screw. Although seemingly an insignificant matter, this bushing, by preventing the screw being driven down too far into the bridge, has the effect of ensuring an easy positive action, and consequently a long and satisfactory service, the importance of which is quite material. This construction is protected by letters patent.

AO-Combined Coil Spring

Screw and Washer (Patent applied for.) By the combination of these important elements a

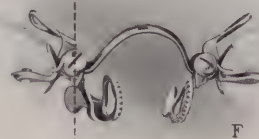


The AO-Combined Coil Spring, Screw and Washer for repair work. Patent applied for.



The AO-Washer, an important detail in AOC_o finger-piece construction. Patented.

In fitting the Fits-U or other AOC_o finger-piece eyeglass having the AO-Loop construction the optician first bends the loops to place the guards in the correct vertical and horizontal positions, as in Figures A, B, C, G, H, J. The surface of each guard is then adjusted independently to conform to the bony structure of the nose where the guard is to rest. Each arm is then adjusted to place the guards nearer together (Fig. F), or farther apart (Fig. D), as the case may require, allowing the action of the springs to exert only a very slight pressure upon the nose before the guards come to a positive stop. After these adjustments have been made the free forward edges of the guards should be turned in slightly so that these edges will pile up tiny folds of flesh and effectually prevent the eyeglasses from slipping forward. This last adjustment is the principal and most important function of the patented AO-Loop.



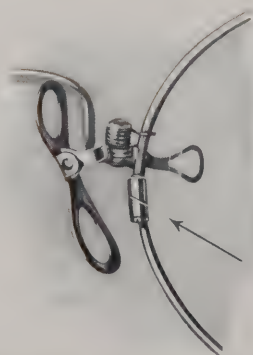
Some of the various adjustments for separation between guards made possible by the patented AO-Loop construction.

AOCO SYSTEM OF FINGER-PIECE EYEGGLASS SIZES

Dimension Number	Height Inches Millimeters	Inclination Inches Millimeters	Pupillary Distance			
			1 Eye Millimeters	o Eye Millimeters	oo Eye Inches Millimeters	ooo Eye Millimeters
412	$\frac{1}{8}$ 2	$\frac{1}{8}$ 3.5	56	$2\frac{1}{8}$ 57.5	59	60
422	$\frac{1}{8}$ 3.5	$\frac{1}{8}$ 3.5	56	$2\frac{1}{8}$ 57.5	59	60
512	$\frac{1}{8}$ 2	$\frac{1}{8}$ 3.5	57	$2\frac{1}{8}$ 59.5	60	61
522	$\frac{1}{8}$ 3.5	$\frac{1}{8}$ 3.5	57	$2\frac{1}{8}$ 59.5	60	61
533	$\frac{3}{8}$ 5	$\frac{3}{8}$ 5	57	$2\frac{1}{8}$ 59.5	60	61
612	$\frac{1}{8}$ 2	$\frac{1}{8}$ 3.5	59	$2\frac{1}{8}$ 60.5	62	63
622	$\frac{1}{8}$ 3.5	$\frac{1}{8}$ 3.5	59	$2\frac{1}{8}$ 60.5	62	63
633	$\frac{3}{8}$ 5	$\frac{3}{8}$ 5	59	$2\frac{1}{8}$ 60.5	62	63
712	$\frac{1}{8}$ 2	$\frac{1}{8}$ 3.5	61	$2\frac{1}{8}$ 62.5	64	65
722	$\frac{1}{8}$ 3.5	$\frac{1}{8}$ 3.5	61	$2\frac{1}{8}$ 62.5	64	65
733	$\frac{3}{8}$ 5	$\frac{3}{8}$ 5	61	$2\frac{1}{8}$ 62.5	64	65
744	$\frac{1}{8}$ 6.5	$\frac{1}{8}$ 6.5	61	$2\frac{1}{8}$ 62.5	64	65

The first figure indicates the pupillary distance in sixteenths of an inch above 2 inches for o eye lenses, for example, the numbers beginning with four will have a pupillary distance of $2\frac{1}{8}$, numbers beginning with 5 will have a pupillary distance of $2\frac{1}{8}$. The second figure indicates the height of the bridge in sixteenths and the third figure indicates the inclination of the crest of the bridge in sixteenths beyond the plane of lenses. Metric equivalents of all inch dimensions are given in above table, corresponding pupillary distances for other regular eye sizes are listed.

means is provided for quick repair work overcoming the annoyance of having to assemble the tiny parts. If a Fits-U or other coil spring eyeglass is brought in for repair having a



Detail of AOCO Patented Eyewire Joint for Fits-U Eyeglass Frames

broken spring or a stripped thread post screw it becomes a very simple matter to employ a combined coil spring screw and washer thereby saving time and making a better and more finished looking job. This useful repair material is made in gold-filled, rights and lefts being furnished in each dozen pairs. It is essential to specify AOCO make in ordering.

Springs Much thought and patient study have entered into the development of the requisite tension of springs used for AOCO finger-piece eyeglasses to obtain that nicety of pressure necessary to perfect fitting. As a result, guards exert a uniform pressure sufficient to maintain them in their correct position



G



K

K, showing the nicety of adjustment made possible by the patented AO-Loop construction



H



L

L, the ordinary type of finger-piece eyeglass and its limited possibilities



J

Other adjustments in the vertical plane. Easily made with pliers

immediately following may be supplied with zylonite rims (see illustration, page 144) when so ordered in 1, 0, 00, and 000 eye size. Standard thickness, bevel edge, Centex lenses in regular interchangeable sizes can be used.

Zylonite Guards will be supplied in the several colors as follows: white, amber, flesh (light pink), light (transparent), and dark (imitation tortoise shell). Dark Zylonite guards will be supplied unless otherwise ordered.

Material Small material and parts for repair work such as guards, screws, springs, etc., can be obtained upon short notice from the stocks of representative wholesalers.

without the slightest discomfort to the wearer. Extra springs for repair work may be obtained at moderate cost.

Inset and Outset It is frequently desirable to employ Inset or Outset construction in fitting finger-piece eyeglasses, and for this purpose we manufacture the Inset construction to set lenses *out*, and Outset construction to set lenses *in*, as illustrated in Fig. M.

Finger-piece Frames The demand being largely for the rimless type of finger-piece eyeglasses, there are many who are not familiar with the construction of the AOC frames. Attention is

called particularly to page 146 on which the Fits-U frame is shown. Any type of rimless mounting can also be supplied with frames when so ordered. The inconspicuous position of the patented eyewire joint should be noted.

Zylonite Rims Any type of finger-piece mounting listed on the pages



Inset



Outset



Regular

Fig. M

Inset construction, to set lenses *out*
Outset construction, to set lenses *in*

Fitting Sets and Size Assortments

Fitting Sets consisting of one dozen or one-half dozen mountings set with o eye crystal white lenses with catalogue and dimension numbers etched are supplied in the regular dozen and half-dozen assortments. These are in substantially made cloth-covered wooden cases lined with velvet. A dimension card supplied with each set gives full information for ordering. These sets enable the adjuster to select at once the proper size eyeglass for the case he is fitting, and are therefore a very useful as well as an ornamental adjunct to the fitting table.

Unless particular sizes are ordered, regular dozen and half-dozen assortments are usually furnished. These size assortments are as follows:

AOC_o one dozen assortment, one pair each. Nos. 412, 422, 512, 522, 533, 612, 622, 633, 712, 722, 733, 744.

AOC_o one-half dozen assortment, one pair each. Nos. 412, 422, 512, 522, 622, 633.

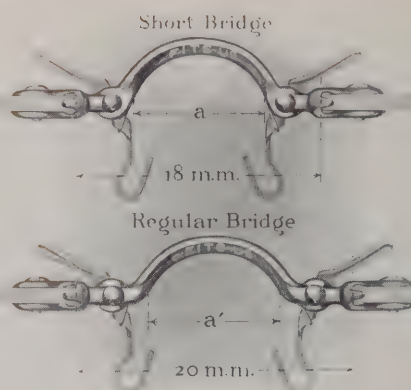
Catalogue Numbers carry only the styles of guards. It is therefore necessary to state also quantity, quality, sizes, and whether rimless, frames, or with zylonite eyes (if frames or zylonite eyes, give size of eye), whether zylonite or sanitary guards (when both are listed).

AOC_o Short Bridge for Finger-piece Eyeglasses (Patent applied for.) We have recently made some important improvements in the construction of bridges and have devised a practical form of finger-piece eyeglass having a much shorter distance between lenses for an equal base measurement than the regular form. This difference is graphically shown in the above illustration. It will be noted that a saving of almost 2 mm. on the P. D. of an eyeglass is thus made possible. The use of this short bridge finger-piece now removes the only serious objection that has been brought against this type of eyeglass. A o o eye lens with the new short bridge gives a slightly shorter P. D. than the regular bridge with an o eye lens.

This new short bridge can now be supplied on the regular Fits-U styles when specified on orders. A new system of dimension numbers has been devised for these goods. In this system the P. D. need not be considered in measuring the size of the mounting but instead the distance between lenses varying by 2 mm. in the regular sizes.



AOC_o Finger-piece Eyeglass Mounting with Zylonite Rims



Comparative distance between lenses for regular and short bridge (patent applied for) having same base measurement

In the dimension table given on page 145, the system is so simple that it can be easily learned and even more quickly comprehended than the regular AOC_o finger-piece bridge system given on page 142.

AOCO SYSTEM FOR SHORT BRIDGE FINGER PIECE EYEGLASSES

CONSTRUCTION OF BRIDGE, PATENT APPLIED FOR

NOTE.—Sizes 1723 to 2266 in the following system approximate in all dimensions their corresponding sizes in the regular 412 to 744 system (see page 142), with the exception of the P. D. In fitting with a regular Fits-U set, add 1.5 mm. to 2 mm. to the length of each lens if *short bridge* is ordered

Dimension Number	Dist. Between Lenses Millimeters	Height Millimeters	Inclination Millimeters	Pupillary Distance			
				1 Eye Millimeters	o Eye Millimeters	oo Eye Millimeters	ooo Eye Millimeters
1723	17	2	3	54	55.5	57	58
1733	17	3	3	54	55.5	57	58
1923	19	2	3	56	57.5	59	60
1933	19	3	3	56	57.5	59	60
1955	19	5	5	56	57.5	59	60
2023	20	2	3	57	58.5	60	61
2033	20	3	3	57	58.5	60	61
2055	20	5	5	57	58.5	60	61
2223	22	2	3	59	60.5	62	63
2233	22	3	3	59	60.5	62	63
2255	22	5	5	59	60.5	62	63
2266	22	6	6	59	60.5	62	63

Explanation: Knowing the distance between lenses and P. D. of patient being fitted, it is a simple matter to figure the size of lens required. For instance, a 1723 size mounting having 17 mm. distance between lenses fits a nose having P. D. of 57 mm. The difference, 40 mm., is the length of lens required, which is the regular length for oo eye.

Regular lengths of rimless lenses are as follows:

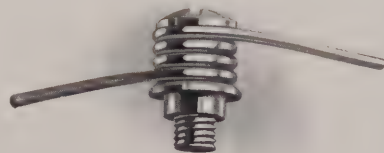
1 eye	-	-	37 mm. long	oo eye	-	-	40 mm. long
o eye	-	-	38.5 mm. long	ooo eye	-	-	41 mm. long

Order sizes by dimension numbers given above.

For the short bridge style of finger-piece eyeglasses we supply the usual dozen and half dozen fitting sets, as explained in the foregoing, except that the assortments are furnished in the new short bridge system. The mountings in these sets are glazed with oo eye plano white lenses with catalogue number of guard and dimension numbers etched in the usual way. In ordering these sets it is necessary to specify "short bridge".

Sgo Shaped Bridge This construction, as shown in the illustration, is radically different from the usual finger-piece bridge. It is favored by some on account of its resemblance to the regular eyeglass spring. Any AOCO Fits-U eyeglasses can be supplied with this type of bridge when so ordered. The Sgo shaped bridge is regularly made in six sizes, two of each size being supplied in every dozen assortment as follows:

Dimension Number	P. D. o Eye Inches Millimeters	Dimension Number	P. D. o Eye Inches Millimeters
24	{ 2 1/16 { 57.5	27	{ 2 1/8 { 62.5
25	{ 2 1/8 { 59.5	28	{ 2 1/4 { 64.
26	{ 2 1/4 { 60.5	30	{ 2 3/8 { 65.5



AOCO Combined Spring and Screw
for Finger-piece Eyeglasses
(Patented)

Fitting sets of the above Frames and Mountings with Etched Lenses supplied when ordered.

(A)

A

B

C

D

E

F

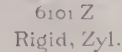
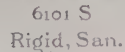
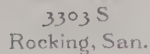
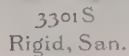
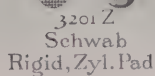
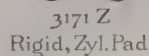
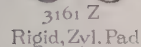
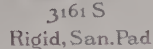
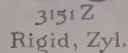
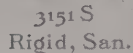
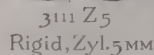
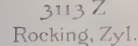
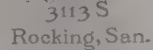
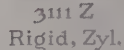
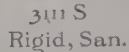
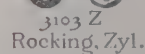
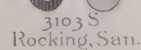
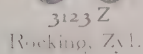
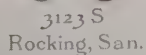
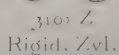
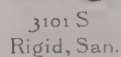
G

H

REGULAR AND SPECIAL STYLES OF AOCo FINGER PIECE EYEGLASSES

- A. Fits-U Eyeglass Mounting, regular style. Patented.
- B. Fits-U Eyeglass Frame, regular style. Patented.
- C. Fits-U Eyeglass Mounting, with post screws placed behind the lenses, making a less conspicuous mounting, having an exceptionally narrow pupillary distance. Patented.
- D. Fits-U Eyeglass Mounting, with detachable flat spring instead of the usual coil spring.
- E. Fits-U Eyeglass Mounting, with No. 890 style bridge, see page 145. Patented.
- F. Schwab Eyeglass Mounting. Patented.
- G. Fits-U Eyeglass Mounting, with arms so constructed that any regular styles of offset guards can be used. Catalogue No. 3191. Patented.
- H. Fits-U Eyeglass Mounting, with Zylonite rims. Patented.

A full description of AOCo Finger-piece Eyeglasses will be found on pages 139 to 148, inclusive.



CATALOGUE NUMBER

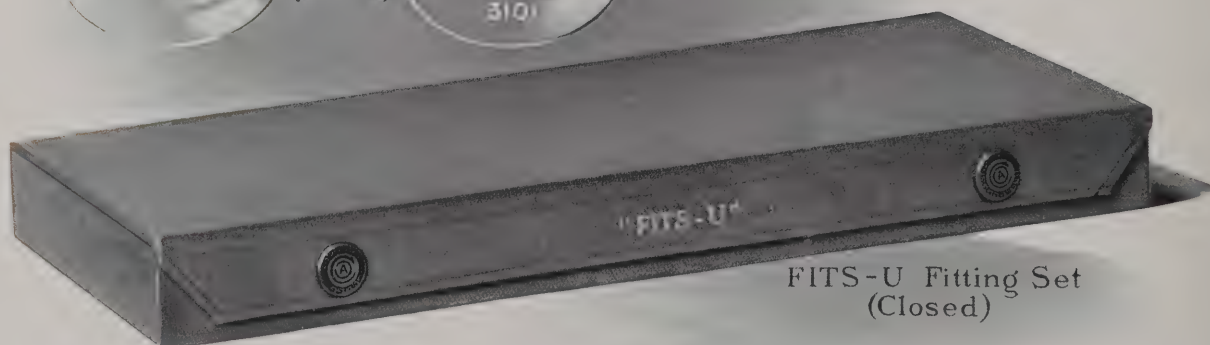
DESCRIPTION



Half Dozen
FITS-U Fitting Set



Dozen
FITS-U
Fitting Set



FITS-U Fitting Set
(Closed)

FITS-U FITTING SETS

For descriptions and size assortments, see pages 144 and 145

MATERIAL FOR SPECTACLES AND EYEGLASSES





Press Room in Material Department

MATERIAL FOR SPECTACLES AND EYEGLASSES

IT is impossible for us to illustrate or describe all of the great variety of materials that enter into the construction of the many lines of spectacles and eyeglasses which we manufacture. To produce standard qualities of finished goods we must first have the component parts correct in every detail and uniform in dimensions and finish.

The production, therefore, of this multitude of parts, all of necessity, small and often delicate, receives our constant and watchful attention. While many parts are apparently duplicates of each other in the various metals of which they are made, each requires its individual processes, differing with the peculiarities of their respective metals, that the finished part may contain the values of temper and ductility required.

Standards of dimensions originated by us have been adopted universally by manufacturers of similar goods, and the similarity of



Stock Room

design and appearance of spectacles and eyeglasses is largely if not wholly due to our products being taken as the models.

Sizes We recommend a careful study of the systems and measurements for styles and sizes, as in ordering it is quite essential that all specifications be given explicitly. Measurements should be taken and written in the metric system, the sizes being expressed in multiples of a millimeter.

Metals Our aim is always to produce these parts in the various metals for which there is a reasonable demand, and those styles and metals most generally called for are carried in AOCo stock. Our list of metals from which material may be manufactured includes gold, silver, gold-filled, steel, alumnico, alumnica, German silver, Roman alloy and regaloid. In ordering material it is necessary to state the metal desired; if gold, the karat, and if gold-filled, the karat and quality.

Patented Styles Much of the special material listed on the following pages is made under patents owned or controlled exclusively by the American Optical Company. These patented structural details very frequently are closely imitated by other makers, although the deception can be readily discovered. To avoid annoyance from such causes it is important to specify AOCo manufacture in ordering any goods shown or listed in this catalogue and to be sure that you receive only the genuine.

Lists of material carried in AOCo stock will be supplied free upon request.



Stock Room, Material Department

TEMPLES

The characteristic difference between many types of spectacles lies wholly in the construction or design of the temples. In our efforts to refine the regular forms of temples we have not only made improvements in shape, weight and construction, but we have developed many special structural features in temple manufacture for each of which special advantages are claimed.

All styles of AOCo temples are given here and comprehensively illustrated. These goods are made in all metals for which there is a demand.

Straight Temples are largely used upon "C" Bridge spectacles. Their principal advantage lies in the fact that straight temple spectacles may be put on and taken off easier than any other style. Consequently, these styles are a great comfort and convenience for persons who require glasses only for reading.

Half-riding Temples These styles are a compromise between straight temples and riding temples. They are recommended for those who find it difficult to retain straight temple spectacles upon the face. They are also largely used for Trial Frames, see Trial Set Section.

Riding Temples are used upon the greater proportion of spectacles sold. They are most practical for constant wear, can be comfortably fitted and present the lightest and most desirable appearance. The Cable (C) and Half Cable (HC) forms of Riding temples are slightly heavier in gauge than their corresponding solid styles, but this is more than offset by the additional comfort they provide. For even greater ease and comfort the Comfort Cable (CC) form of Riding temple is most popular.

Measurement of Temples It is customary and, therefore, our rule to measure the length of a temple from its extreme ends.

REGULATION TEMPLE LENGTHS

STYLE	SHORT		REGULAR		LONG		EXTRA LONG	
	MM.	INCH	MM.	INCH	MM.	INCH	MM.	INCH
Straight	133	(5 1/4)	140	(5 1/2)	146	(5 3/4)	152	(6)
Half-riding	133	(5 1/4)	140	(5 1/2)	152	(6)	159	(6 1/4)
Riding	140	(5 1/2)	152	(6)	165	(6 1/2)	174	(6 3/4)
Short O.T. {								
Short P.T. }			54	(2 1/8)				
Turn Pin { Butt	105	(4 1/8)	111	(4 3/8)	117	(4 5/8)	124	(4 7/8)
Tip	67	(2 3/4)	67	(2 3/4)	67	(2 3/8)	67	(2 3/8)

Inch equivalents are given above for comparison. Orders should always be written in mm.

Short Unless other lengths are designated, all orders for spectacles which specify "for children" are supplied with short length temples.

Regular Regular length temples supplied on all spectacles *in any size of eye* except when order specifies "for children" or when particular length is designated.

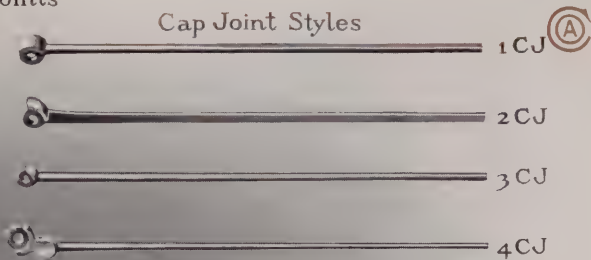
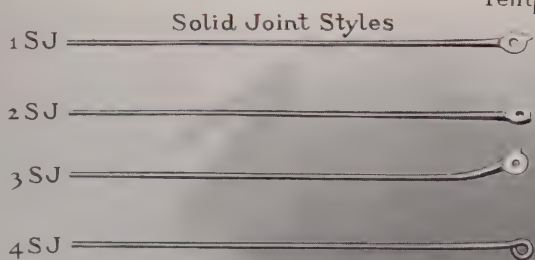
Long and Extra Long These are special lengths and are supplied only when so ordered.

TEMPLE JOINTS

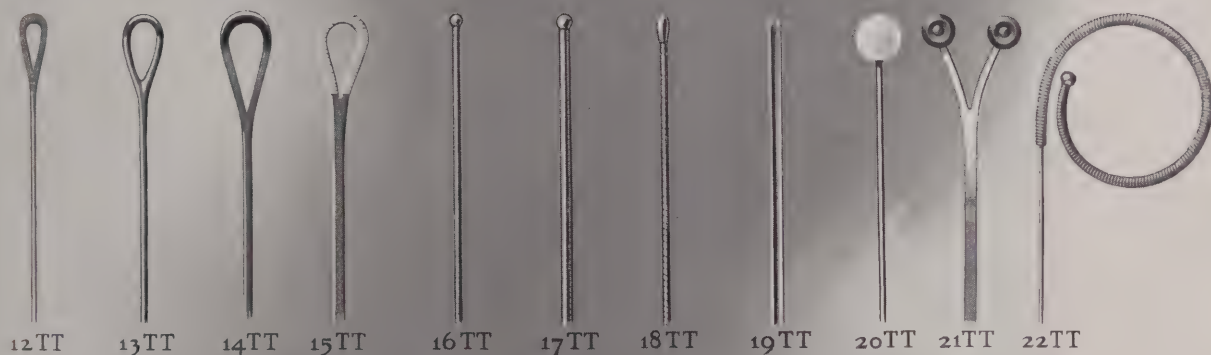
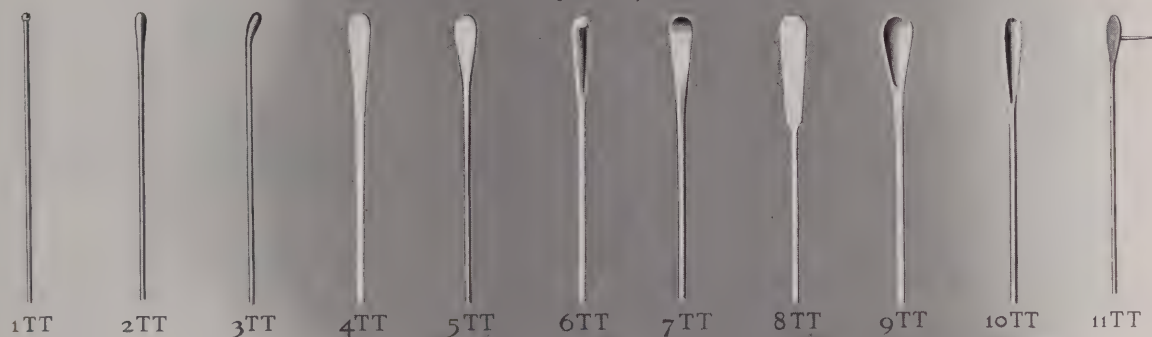
AOCo Temple Joints The temple joint is the end of the temple butt where it forms a connection with the end piece. There are two distinct styles, classed as Solid Joints and Cap Joints.

Solid Joint The Solid or "Split" Joint, as it is frequently termed, is a very simple construction and is largely preferred by the American trade. The *Regular* form, 1 S.J., is shown in the cut. The *Invisible*, 2 S.J., for use with invisible end piece, and the *Mansfield (patented)*, 3 S.J., for use in the Mansfield end piece (see page 171), are modifications of the regular form. The *Special* form, 4 S.J., is used on the lower qualities of German silver and Roman alloy goods, which are designated throughout this catalogue as having the Special end piece.

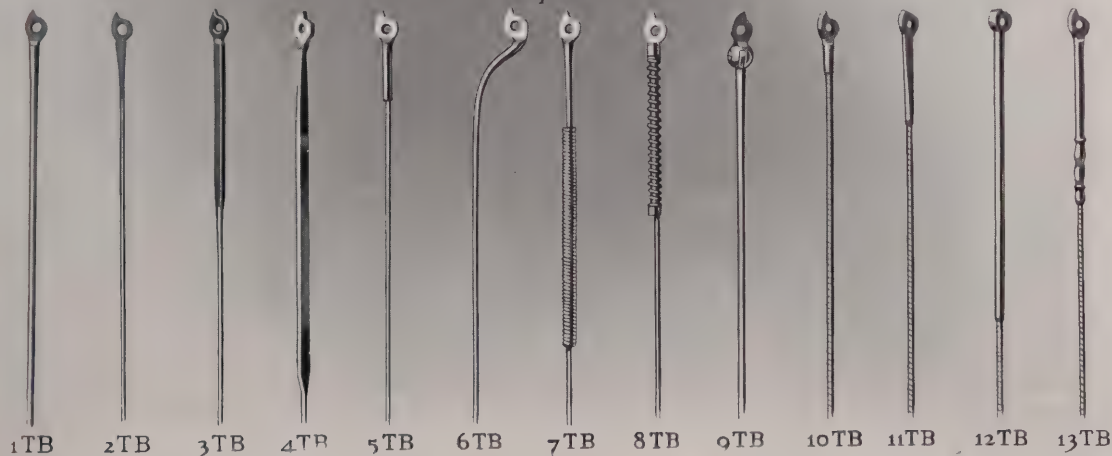
Temple Joints



Temple Tips



Temple Butts



STYLES OF TEMPLE JOINTS, TIPS AND BUTTS

See description on opposite and following pages

Cap Joint While distinctly an American type, this style has of late years been in greater demand in Europe than in America, although it is used here on some styles of gold frames. It is characterized by a cap either riveted on or swaged up from the solid wire, which hides the connection or joint when worn. The *Regular* style, 1 C.J., has a flat cap, while the *Ball* style, 2 C.J., has a rounded or ball cap. What is sometimes known as the *English* style, 3 C.J., has a small cap fitted well back toward the temple butt, and is a very practical and desirable construction. The *Reversible (patented)*, 4 C.J., is provided with a double-sided cap for reversible temple frames, as shown.

TEMPLE TIPS AND BUTTS

Numbers below refer to illustration on preceding page. In ordering special construction, details should be explicitly given to avoid misunderstanding.

TEMPLE TIPS

1 TT Ball Tip	9 TT Spoon Tip	16 TT Cable Ball Tip
2 TT Pear Tip	10 TT Narrow Spoon Tip	17 TT Comfort Cable Ball Tip
3 TT Bent Pear Tip	11 TT Pin Tip	18 TT Cable Pear Tip
4 TT Flat Tip	12 TT Small Open Tip	19 TT "U. S." Tip (Patented)
5 TT Flat Pear Tip	13 TT Medium Open Tip	20 TT Zylonite Ball Tip
6 TT Swelled Tip	14 TT Large Open Tip	21 TT Padded Tip
7 TT Bent Tip	15 TT Short Open Tip	22 TT Spiral Tip
8 TT Paddle Tip		

TEMPLE BUTTS

1 TB Round Butt	6 TB Offset Butt	10 TB Stub Cable Butt
2 TB Flat Butt	7 TB Spiral Butt	11 TB Solderless Cable Butt
3 TB Square Butt	8 TB Compensating Butt	12 TB Stump Cable Butt
4 TB Half Flat Butt	9 TB Adjustable Angular Butt	13 TB Fancy Cable Butt
5 TB Revolving Butt (Patented)		

FORMS OF TEMPLES

On the opposite page we show a most complete range of regular and special forms of AOCo Temples. From this illustration a general idea may be gained of the very extensive line of temples that can be supplied. When it is considered that the styles shown may be furnished in various metals, forms of temple joints, tips and butts, and in several lengths and weights, the multiplicity of possible combination seems almost unlimited. In ordering temples it is necessary to be very explicit as to style, length, and metal desired, to avoid the possibility of misunderstanding. Unless otherwise ordered, regular lengths are supplied, see page 152.

FORMS OF RIDING TEMPLES

1 T Riding	5 T Half Cable Half Flat	9 T Twisted
2 T Cable (C)	6 T Heavy Auto Cable	10 T Spiral Shield
3 T Comfort Cable (CC)*	7 T Heavy Auto Cable with Ferrule	11 T Spiral Tip
4 T Half Cable Half Round	8 T Rubber Covered Auto Riding	12 T Grab

FORMS OF HALF-RIDING TEMPLES

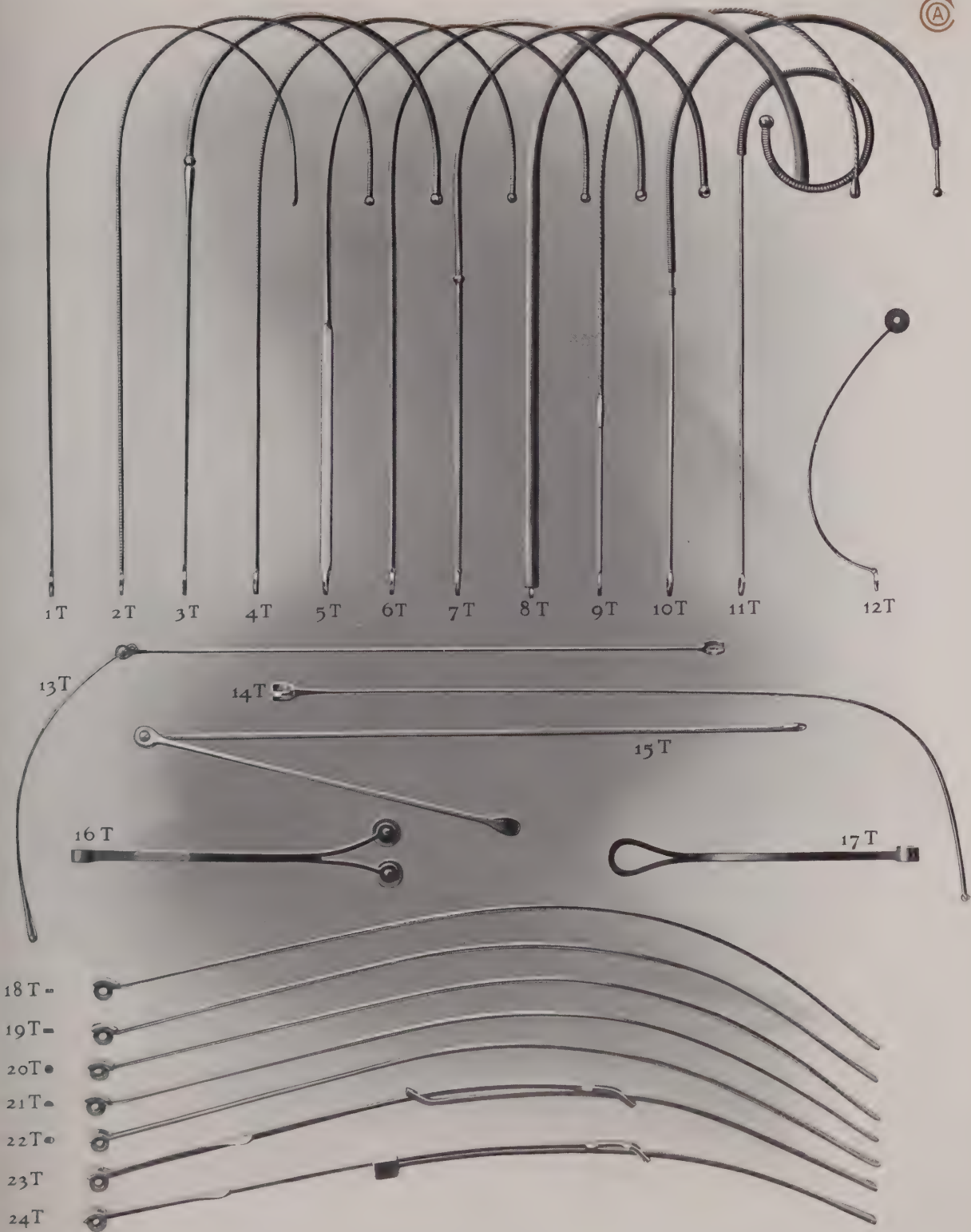
13 T Half-riding Turn Pin with Stop	14 T Half-riding
-------------------------------------	------------------

FORMS OF STRAIGHT TEMPLES

15 T Turn Pin	19 T Flat, Heavy	22 T Oval
16 T Short Padded Tip	20 T Round	23 T Loop Slide
17 T Short Open Tip	21 T Half Round	24 T Band Slide
18 T Flat		

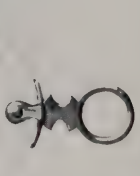
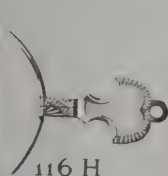
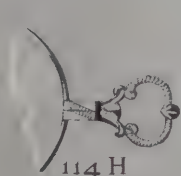
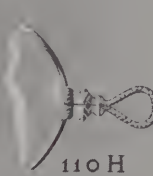
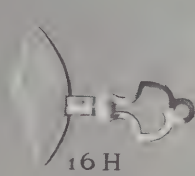
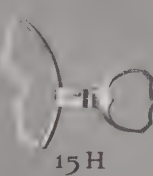
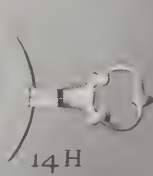
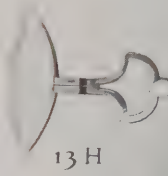
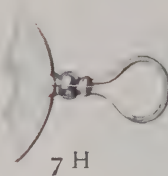
In ordering temples only, it is necessary to specify the style of temple, the metal and quality in which it should be supplied, the weight, length, style of tip and butt, and form of temple joint. It is desirable to state also the catalogue number of the goods in which the temples are to be used. If rimless end pieces are wanted attached to temples, order should be written "temples complete".

*Made in two weights, regular, Comfort Cable and light, Junior Comfort.



STYLES OF SPECTACLE TEMPLES

See description on opposite page



EYEGGLASS HANDLES

See description on opposite page



1 GH



2 GH



3 GH



4 GH



5 GH



6 GH



7 GH



8 GH



9 GH



10 GH



11 GH



12 GH



13 GH



14 GH



15 GH



16 GH



17 GH



18 GH



19 GH



20 GH

HANGERS

We have attempted to show above the various regular forms of hangers now employed on AOC Co eyeglasses. Modifications of these forms are made upon special styles, but the demand for special hangers only is so small as not to warrant mention or illustration here.

HANDLES

The illustration on opposite page shows the complete styles for AOC Co eyeglass handles. The ring for Cord (1 H) and the Ball Ring Handle (5 H) styles are coming more than ever into general use for the better grades of eyeglass frames, and there is a corresponding decrease in the demand for the fancy styles. Throughout the catalogue we have indicated the styles regularly furnished on Eyeglass Frames carried in stock. Where other styles are desired they are necessarily considered as special and the goods must be made up from the very beginning, causing delays which might be avoided by ordering regular goods. The engraved styles of eyeglass handles are supplied only on gold goods.

In ordering goods with any particular style of handle, give catalogue number of handle as well as number of goods.

Rimless handles are never furnished with eyeglass mountings unless specially ordered. Grab front frames and mountings are regularly furnished with handles except medio styles of mountings.

EYEGLASS SPRINGS

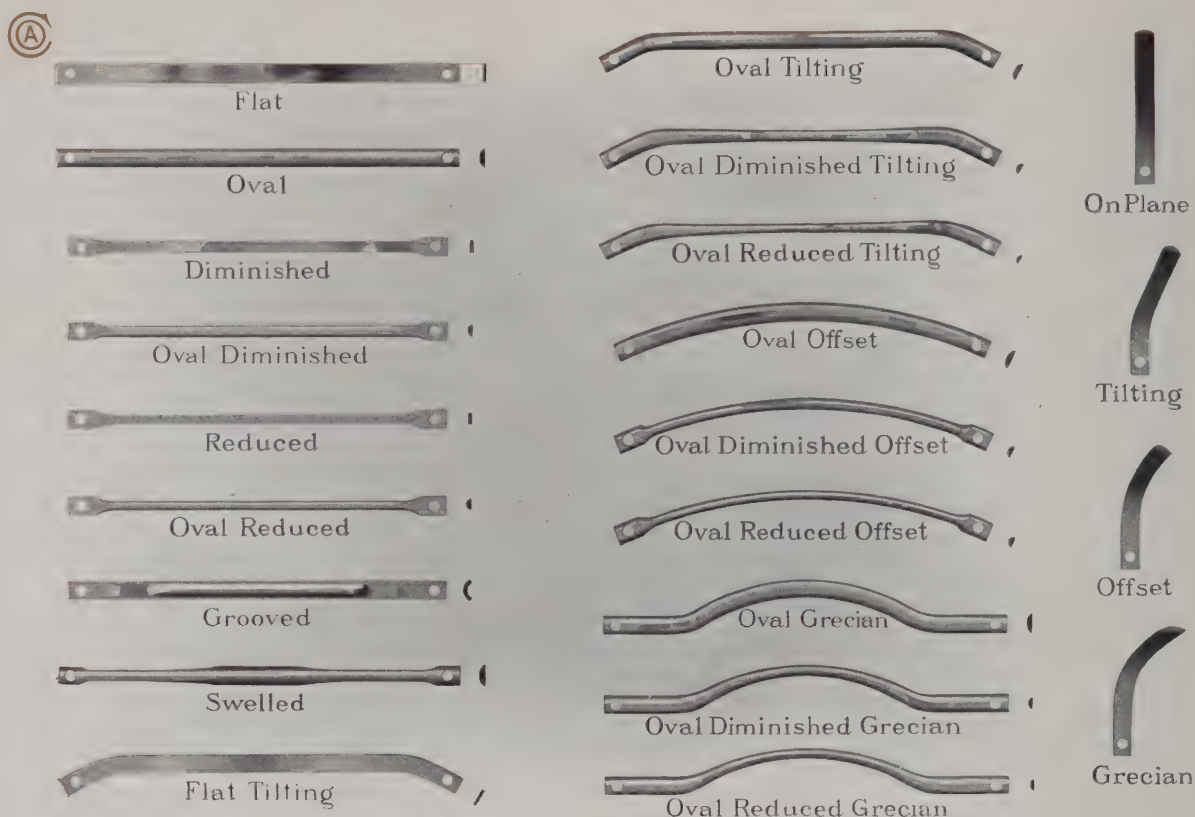
The illustration on the page following shows the various forms of eyeglass springs commonly used on eyeglass frames and mountings and supplied in all metals. Unless otherwise ordered we regularly supply oval, full width, on plane styles.

Combinations of any of the following details may be ordered:

Stock	Construction	Shape	Inclination
Flat	Full width	Regular (R)	On Plane
Oval	Diminished	Adjustable Eyeglass (C)	Tilting
Grooved	Reduced	Hoop (H)	Offset
	Swelled	Straight Top (K)	Grecian
		European (E)	

In ordering give catalogue number of goods, quality, as well as details for springs, such as stock, construction, shape, inclination, length.

*Grecian Springs are regularly supplied flat instead of oval.



EYEGLOSS SPRINGS

REGULATION SPRING LENGTHS

Shape	Length for Eyeglass Frames	Length for Rimless Eyeglasses
Regular (R)	54 mm.	54 mm.
Adjustable Eyeglass (C)	57 mm.	51 mm.
Hoop (H)	51 mm.	51 mm.
Straight Top (K)	54 mm.	54 mm.
European (E)	See pages 82, 104 and 120	

Above lengths are regularly supplied unless otherwise ordered.

Regular (R) Springs Regularly supplied on all eyeglasses except adjustable eyeglasses, bar spring eyeglasses and other special styles.

Adjustable Eyeglass (C) Springs Regularly supplied on adjustable eyeglasses and similar styles.

Hoop (H) Springs Supplied only when order so specifies.

Straight Top (K) Springs Supplied only when order so specifies.

European (E) Springs Regularly supplied on European Style Adjustable Eyeglasses.

The combination of letter and number denotes shape and length in millimeters.

In ordering springs other than regulation lengths this system should be employed, see opposite page.

Kolle Patent Construction for Eyeglass Springs, see description and illustration, pages 166 and 172.



H

C

K

R

H 38

C 54

K 44

R 44

H 41

C 57

K 48

R 48

H 44

C 60

K 51

R 51

H 48

C 63

K 54

R 54

H 51

C 67

K 57

R 57

H 54

C 70

K 60

R 60

E

E 70

H 57

E 73

R 63

H 60

E 76

R 67

H 63

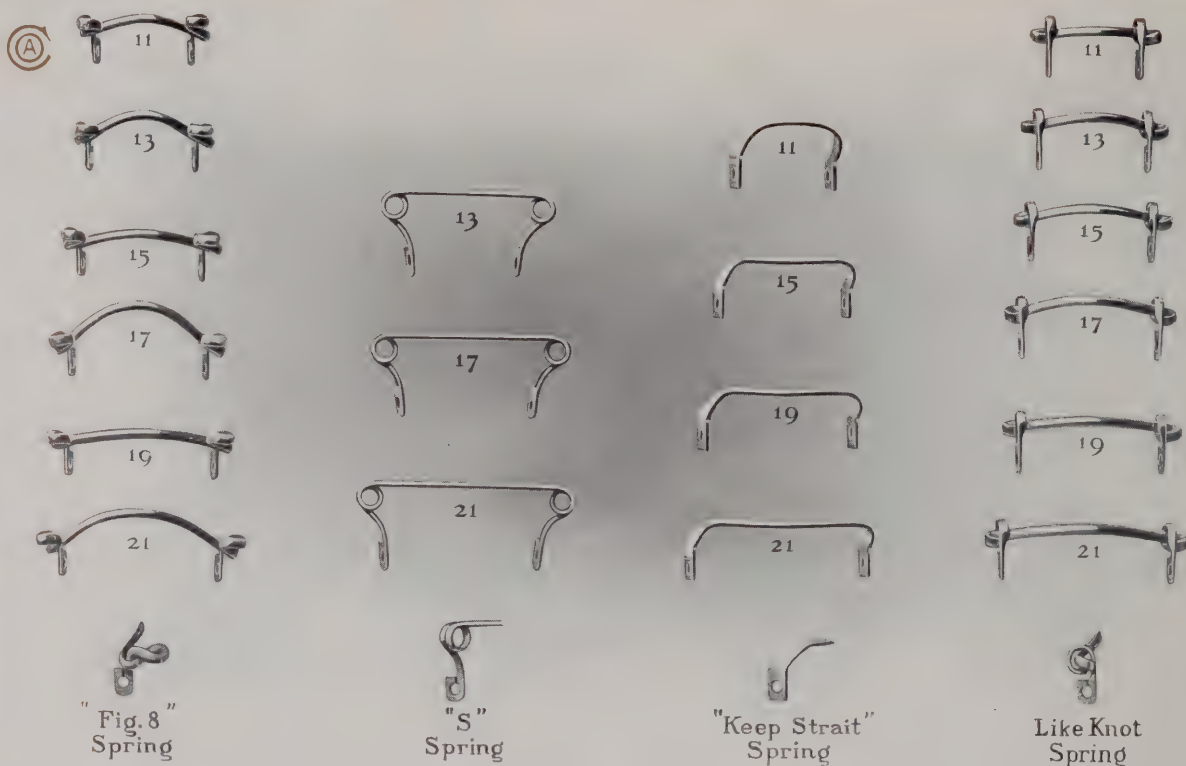
E 83

R 70

E 89

EYEGLOSS SPRINGS

AOC Co Standard sizes and shapes. Numbers given represent lengths in mm. See description on opposite page



EYEGLASS SPRINGS

"Figure 8" Springs (Patented.) As may be noted in the illustration, this form of spring gains its resiliency from the "8" shaped loops at either side. It is quite stiff and at the same time flexible enough to allow the guards to be spread easily to put on or take off. Made in six regular sizes as indicated, the number denoting distance in mm. between posts.

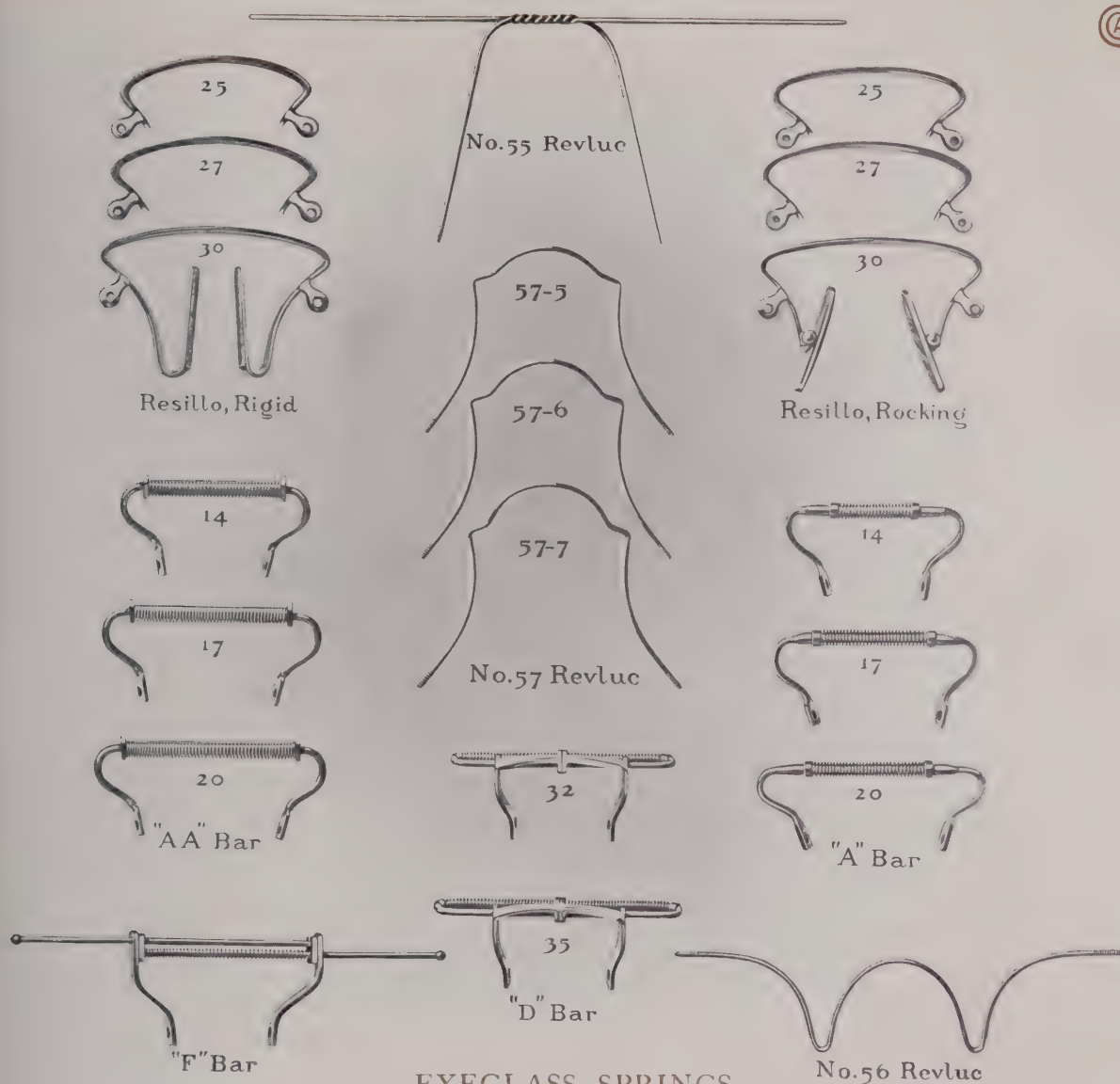
Like Knot Springs (Patented.) This style is somewhat similar in character to the "Figure 8". The spring loops or bends are carried off to either side instead of forward. Also made in six sizes as shown.

"S" Springs (Patented.) The form of this spring is similar to the straight top (K) spring. The extra turn in the wire adds greatly to its flexibility. Made regularly in three sizes, viz.: 13, 17 and 21 mm. between posts.

"Keep Strait" Springs (Patented.) When worn this spring is practically invisible from the front as only the thickness of the metal is apparent. The construction is particularly simple and neat, and for this reason the "Keep Strait" has always been very popular. Center of spring is reduced as shown in profile. Regularly made in four sizes, viz.: 11, 15, 19 and 21 mm. between posts.

AOCO Patented Loop End for Springs. Attention is called to our Patented Loop End as furnished on "S" Springs, "Figure 8" Springs and Like Knot Springs. This improvement allows the construction of eyeglass springs or guards from round or narrow oval wire or flat stock with the end made full width, completely filling the box of the stud and overcoming the difficulty of firmly securing such parts in place without liability of rocking or weaving.





EYEGLOSS SPRINGS

Revluc Numbers 55 and 56 of the Revluc styles are supplied in one size only as may be noted in above illustration. The number 57 style is supplied in three heights of crest, viz.: 5, 6 and 7 mm. In ordering the 57 style springs alone it is necessary to state sizes desired.

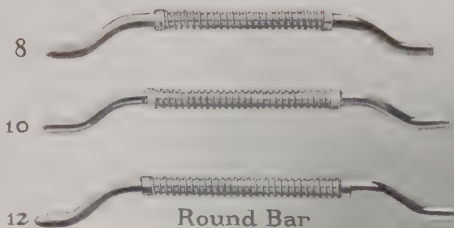
Resillo This is a recently devised form of complete eyeglass mounting for which there is considerable demand in the English and Continental trade. The springs continue down and the ends are formed integral with, or attached to, the guards in the Rigid and Rocking styles respectively. There are three sizes regularly supplied, viz.: 25, 27 and 30 mm., indicating the extreme width at bends of spring, measured inside.

"AA" Bar, "A" Bar Same as illustrated. Supplied in three sizes, measuring 14, 17 and 20 mm. between posts.

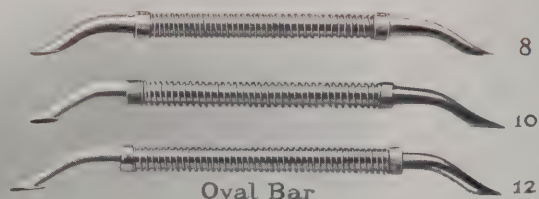
"D" Bar As shown in illustration (rear view), spring bar is offset and passes across in front of lenses. Made in two sizes which measure 32 and 35 mm., extreme width of bar.

"F" Bar Sometimes known as the Farley bar spring. Made one size only, same as illustration.

Ⓐ



Round Bar



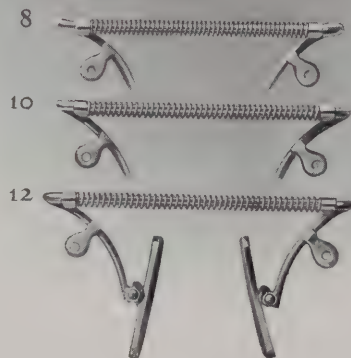
Oval Bar



Flat Bar



Light Bar
L Bar



Rimless L Bar

EYEGLOSS SPRINGS

Bar Springs The manufacture of Bar Spring styles in Frames and Frameless Eyeglasses is an important branch of our eyeglass business. Our line is most complete in this respect. On pages 55, 64, 79, etc., will be found the complete goods with springs of this type, giving their respective catalogue numbers for convenience in ordering. The above illustration shows the sizes in which each style is supplied.

All styles shown above, viz.: Round Bar, Oval Bar, Flat Bar, Light or L Bar, Rimless L Bar and including Triple Bar (not shown) are supplied in three sizes, measuring respectively 8, 10 and 12 mm. between guards.



EYEGLOSS GUARDS

Adjustable, Solid and Solid Adjustable Styles

All guards listed below are shown in the above illustration. These comprise a complete line of the Adjustable, Solid and Solid Adjustable Guards, for which there is a steady demand. In referring to styles, the system of numbering will be found a great convenience. These guards are made in all metals the demand for which warrants their manufacture.

Adjustable Styles Nos. G 1, G 2, G 3, G 4, G 5, G 6 (Bailey Rubber pat.), G 7, G 8, G 9, G 10, G 11, G 12, G 17, G 18, G 19.

Solid Styles Nos. G 13, G 14, G 15, G 16 (for C. S. S. S.), G 25 (zylonite only).











Solid Adjustable Styles Nos. G 20, G 21, G 22.

Above styles can be supplied in cork or zylonite except Nos. G 5 and G 25, which are supplied in zylonite only.

Guards for *Fits-U* and other finger-piece eyeglasses are shown on page 147.

EYEGLOSS GUARDS

Wells Offset Styles

POSITION OF ARM	WIDTH OF ARM	LENGTH OF BLADE							
			A	B	C	D	E	BY	CY
	Reduced	Regular	A 1	B 1	C 1	D 1	E 1	BY 1	CY 1
	Reduced	Short	AO 1	BO 1	CO 1	DO 1	EO 1	BYO 1	CYO 1
	Full	Regular	AA 1	BB 1	CC 1	DD 1	EE 1		
	Full	Short	AAO 1	BBO 1	CCO 1	DDO 1	EEO 1		
CENTER									
	Reduced	Regular	A 2	B 2	C 2	D 2	E 2	BY 2	CY 2
	Reduced	Short	AO 2	BO 2	CO 2	DO 2	EO 2	BYO 2	CYO 2
	Full	Regular	AA 2	BB 2	CC 2	DD 2	EE 2		
	Full	Short	AAO 2	BBO 2	CCO 2	DDO 2	EEO 2		
LOW									
	Reduced	Regular	A 3	B 3	C 3	D 3	E 3	BY 3	CY 3
	Reduced	Short	AO 3	BO 3	CO 3	DO 3	EO 3	BYO 3	CYO 3
	Full	Regular	AA 3	BB 3	CC 3	DD 3	EE 3		
	Full	Short	AAO 3	BBO 3	CCO 3	DDO 3	EEO 3		
HIGH									

System of Numbering In the above table for Wells offset guards it will be noted that the angle is indicated by a letter, as C, and the addition of O, as CO, designates short blade. A repetition of the angle letter, as CC, designates full width arm instead of reduced as regularly supplied. The figure following the letter indicates the position of arm, viz.: 1, center; 2, low; 3, high. All forms of Wells offset guards should be ordered by this system. C 1 Guards, Cork, are regularly supplied unless otherwise ordered.

Styles of Wells Offset Guards The following illustrations show some of the various styles of arms and blades which can be supplied in the above system:



Cork Guards are supplied unless otherwise ordered and are made with double-riveted arm unless ordered "one-piece". For the latter constructions an extra charge is made in gold.

Zylonite Guards are always made in one-piece construction except when angles are ordered for which we have no one-piece dies, in which case the double-riveted construction is supplied. Wide zylonite blades, 3.5 mm. and extra wide, 5 mm. supplied only when so ordered. Zylonite blades are supplied for these or any styles of AOCo guards in any of the following colors: light (transparent effect), white (pure white), amber, flesh (light pink), dark (imitation shell) and black. Dark zylonite supplied unless otherwise ordered.

Sanitary Guards Any style of Wells offset guards can be supplied with corrugated bearing surface, or Sanitary, as it is called. This construction is particularly recommended for its cleanliness and its enhanced appearance.

Shark
SkinBailey
Rubber

BF Zyl.



BH Zyl.



H Zyl.



HH Cork



HH Zyl.

A 1
Zyl.A 1
SanitaryB 1
Zyl.B 1
SanitaryC 1
Zyl.C 1
SanitaryAO 2
Zyl.A 3
Zyl.CO 2
Zyl.

U. S. Guards, Patented



2 Zyl.



2 O Zyl.



2 Sanitary



2 O Sanitary

Clamphold Guards, Patented

EYEGLOSS GUARDS

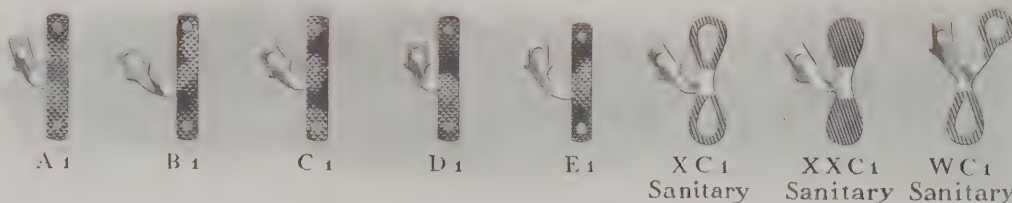
Offset Styles

Shark Skin Guards (Patented.) Shark Skin facing is particularly desirable for guards in preventing the eyeglasses from slipping when the nose has a tendency to be oily or perspiring. In adjusting Shark Skin Guards careful attention is necessary to see that the pressure is uniformly distributed over the entire surface of the blade, with the exception that it should be slightly tighter at the top. The pressure should be very light and the guard so adjusted to engage the fleshy part of the nose as high as the guards will permit. The edges of the Shark Skin blades may be bevelled off with a file and if necessary the surfaces of the blades may be toned down with emery paper. Shark Skin blades will be supplied on any style of Wells Offset Guards, 5 mm. wide, unless otherwise ordered.

Bailey Rubber Guards (Patented.) These guards have facings of specially prepared rubber made with tiny suction cups which cling to the nose, very little pressure being necessary. Supplied in any angle of Wells Offset Guards, regular width. See also G 6, page 163.

U. S. Guards (Patented.) These are a modification on the regular forms of Wells Offset Guards, the feature of their construction being the employment of a circular bearing pad which, being loosely connected to the back, allows a slight rocking motion and a vertical sliding motion, causing it to conform to the shape of the nose and automatically adjust itself in a comfortable position.

Clamphold Guards (Patented.) The design of the Clamphold Guard makes it very desirable from the standpoint of appearance as well as comfort. These guards are made in two styles, regular and offset, numbered 2 and 2-O respectively, supplied sanitary or zylonite as ordered.



EYEGLOSS GUARDS

Offset Styles

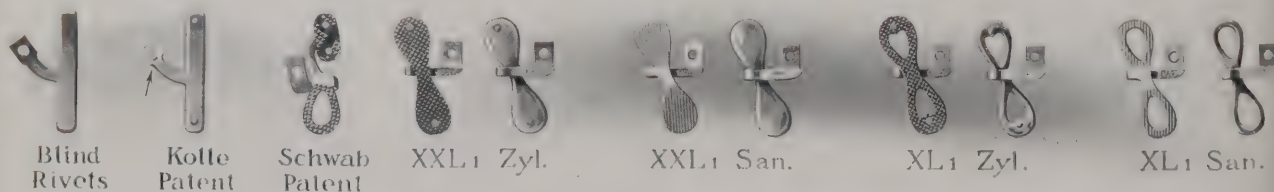
Bonschur Locking Shoulder (Patented.) This is a very important feature which we are able to supply on many of our regular styles of Wells Offset Guards and also on a number of other styles of offset guards, some of these being shown in the accompanying illustration. Briefly, the principle of the Locking Shoulder (usually designated B. L. S.) is that the two tiny shoulders rest against the lower edges of the stud sides. By placing the screw hole in the guard arm slightly lower than usual the tendency is to draw the shoulders up tight and effectually lock the guard and screw, preventing any side motion when the screw is driven home.

AO-Loop Arm (Patented.) This consists of a special construction for offset guards particularly applicable to finger-piece eyeglasses, but which is also supplied in connection with some of the regular forms of guards. By this construction the guard arm is attached to the guard proper at its posterior edge; that is, the edge towards the face. The Ludlow, Suction and Schwab guards are made under this patent. The many advantages claimed for the AO-Loop are explained in the Finger-piece Eyeglass Section, pages 141 to 148, inclusive.

Schwab Guards (Patented.) The patented construction for this guard makes use of a principle unique in eyeglass guard manufacture. As may be noted in the illustration, guard is provided with an upper bearing pad which rocks on both a horizontal and a vertical axis. This horizontal axis motion causes it to seek a comfortable grip upon the fleshy part of the nose and its vertical movement gives it the very desirable property of resisting any tendency to slip forward. In fact, this peculiar mechanical action causes the forward edge of the bearing pad to turn in and grip more securely, resisting any effort to remove the glasses without first spreading the lenses apart in the usual way.

Kolle Patent Many of our regular forms of offset guards can be supplied with the Kolle patent construction for locking the assembled parts. This consists of a small tongue of metal drawn out from lower side of screw hole to engage in a corresponding recess in a spring, which, in turn, locks in a special box stud. Illustration shows the guard construction, the stud being graphically shown on page 172. In ordering, it is necessary to specify Kolle patent guards, springs and studs.

Blind Rivets The C 1 angle Wells Offset Guards having zylonite facings may be supplied with blind rivets; that is, the rivets do not pass through the metal of the guard blades, having been struck up out of the surface of the metal. This leaves the back of guard with a smooth, unbroken surface.





EYEGLOSS GUARDS

Offset Styles

The following named styles of offset eyeglass guards, shown in the above illustration, may be regularly supplied in all metals for which there is a general demand:

Long Offset
Long Offset, rimless
Cuba
Short Spring
No. 512 Style
No. 513 Style
Comfort
Spring
Burbank
Segment

"O"
"Slip-not"
C1 "Slip-not"
Double "Slip-not"
WWC1 Zylonite
WWC1 Sanitary
WC1 Sanitary
*XXC1 Zylonite
*XXC1 Sanitary
*XC1 Zylonite

*XC1 Sanitary
XBI Zylonite
Gauze (Patented)
DC1 Zylonite
DC1 Sanitary
DC1 Perforated Zylonite
DC1 Perforated Sanitary
DC2 Zylonite
DC2 Perforated Zylonite
Ludlow (Patented)

*Also supplied with patented AO-Loop construction of Guard Arm.

Special attention is directed to the last guard shown in the above illustration, known as the Ludlow Guard. Its principal feature is the special patented AO-Loop construction of the guard arm, which has enjoyed a wide popularity from its use on Fits-U finger-piece eyeglasses. The loop arm passing around the outer side of the guard blade gives an opportunity for adjustment in any direction, up, down, in, out, forward or back. This AO-Loop construction is furnished also on the L.G. and L.H. Guards shown on the following page and the Schwab Guard shown on the opposite page. Some idea of this universal adjustability may be gained from the description given in the Finger-piece Eyeglass Section, pages 139 to 148, inclusive.



T1 Zyl.



T1 San.



T2 Zyl.



T2 San.



T3 Zyl.



T4 Zyl.



U1



U2



V Zyl.



V San.



"47" Cork



"47" Zyl.



Hook



No. 9 Reduced



No. 9 Full



No. 10 Reduced



No. 10 Full



Astig Cork Astig Zyl.



Revluc Cork



Revluc Zyl.



1735 X San.



"35L" Cork



L.G. San.



L.H. San.

EYEGLOSS GUARDS

Offset Styles

Of the offset guards shown in the above illustration, the following may be regularly supplied in all metals for which there is a general demand :

"T" Guards Made in six styles as follows : T1 Zyl., T1 San., T2 Zyl., T2 San., T3 Zyl., T4 Zyl.

"U" Guards Made in two styles : U1 Zyl. and U2 Zyl.

"V" Guards Made in two styles : V Zyl. and V San.

"47" Guards Made in two styles : "47" Cork and "47" Zyl.

Other styles of offset guards as shown are :

"Hook "

"No. 9" Reduced Arm

"No. 9" Full Arm

"No. 10" Reduced Arm

"No. 10" Full Arm

Astig Style Cork

Astig Style Zyl.

Revluc Style Cork

Revluc Style Zyl.

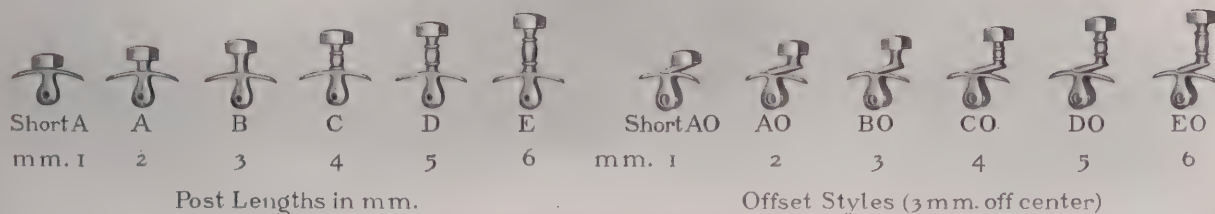
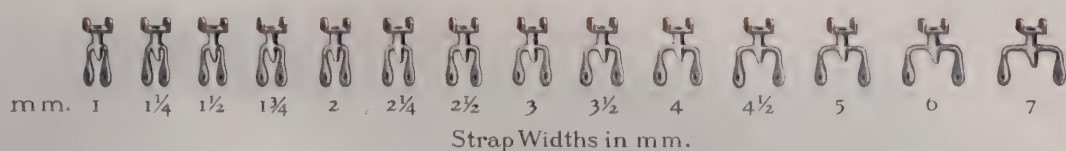
No. 1735 X San.

No. 1735L Cork

L. G. San. (Patented AO-Loop)

L. H. San. (Patented AO-Loop)

See pages 166 and 167, for explanation of AO-Loop patent.



EYEGLOSS STUDS

Strap Widths The figures under the straps in the accompanying illustration represent widths in millimeters and are used as numbers to designate those sizes in ordering. This system, originated by us, is now universally employed. All AOCo straps are made to an accepted standard gauge measured from center of screw hole to the central point of contact of edge of lens. Nos. 1½ and 2 straps are supplied in equal quantities unless order specifies other sizes.

Form of Straps Rimless Studs are regularly supplied with Rounded (R) Straps unless Flat (F) Straps are specified in ordering. Flat Straps can be supplied in all metals except gold-filled. Rounded Straps are regularly furnished on all rimless eyeglasses and spectacles except where otherwise described and listed herein.

Weight of Straps Straps of studs and rimless spectacles are made regular weight unless otherwise ordered. If heavy or extra heavy straps are desired, add H. or E. H. to letter denoting form of strap, as, R. E. H., F. H., etc.

Post Lengths The lengths for stud posts are designated by letters as illustrated. The AA Stud or Short A as it is sometimes called, has no post, the box or cap being soldered direct to straps. B Studs are supplied unless otherwise ordered. The length of a stud post is measured from the bottom of box to the inner surface of straps or eyewire.

Ball Straps This construction for rimless studs and also for spectacle mountings is a very important improvement. Briefly, there is supplied a reinforced or thick ball shaped strap on the tapped side which gives several more threads than the regular strap, insuring a more secure hold for the glass screw. Ball straps can be supplied on any studs or rimless mountings up to 2 mm. width between straps (2 strap). Ball straps are supplied only when order so specifies.

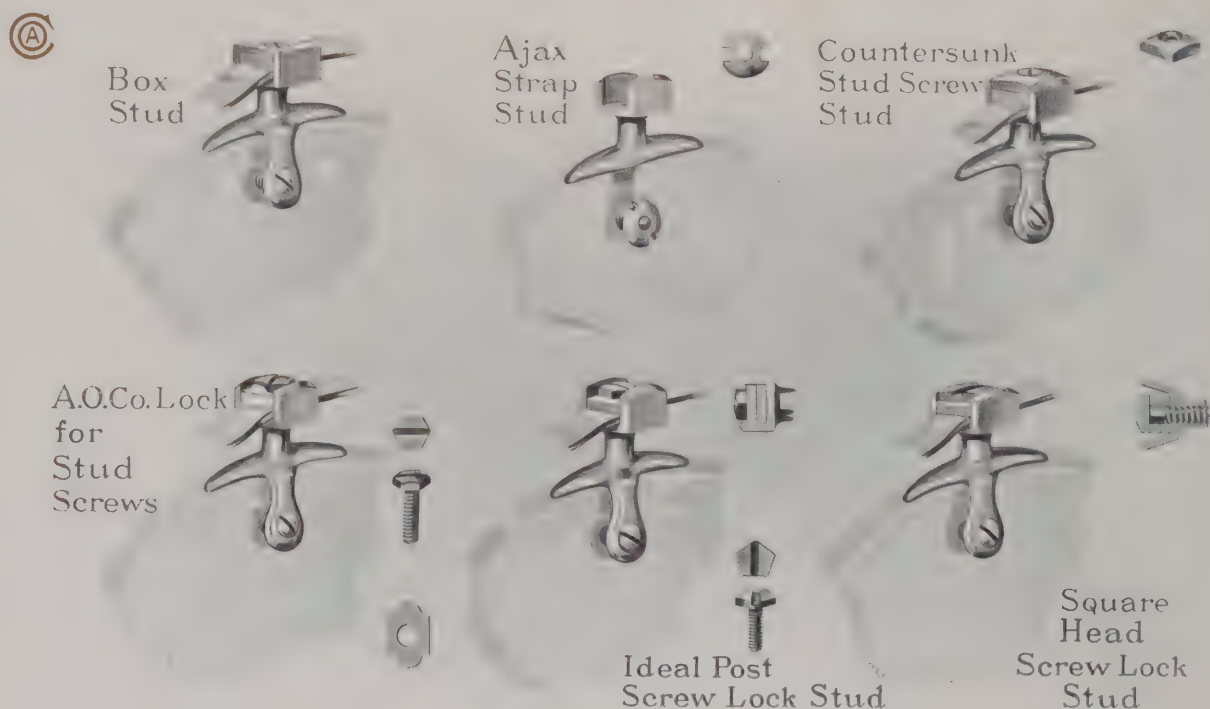
Regular Studs The regular form of eyeglass stud, sometimes called open stud, is most generally used and is supplied unless otherwise ordered.

Offset Studs These measure 3 mm. from center of strap to center of stud screw and may be supplied in any of the following forms of construction:

- Inset.* For setting lenses away from face.
- Outset.* For setting lenses in towards face.
- Upset.* For setting lenses down.
- Downset.* For setting lenses up.
- Diagonal.* For setting lenses diagonally up and out, or down and in, etc.

Offset studs may be supplied in all post lengths from Short AO to EO, as illustrated.

Angular Studs Sometimes called tilting or slanting, are made in all styles, and at any desired angle. Our standard Angular Stud is angular 12° and is furnished unless special angle is designated.



EYEGLOSS STUDS

Box Studs (Patented.) This form of eyeglass stud is now very well known and frequently imitated. It is a very simple construction, permitting the use of any regular styles of guards and springs. The screw is countersunk flush with the top of box, the under side of head bearing directly upon the arm of guard. This gives the mounting a finished appearance. The box construction effectually prevents the guards and springs from "weaving" sidewise so the screw does not become loose.

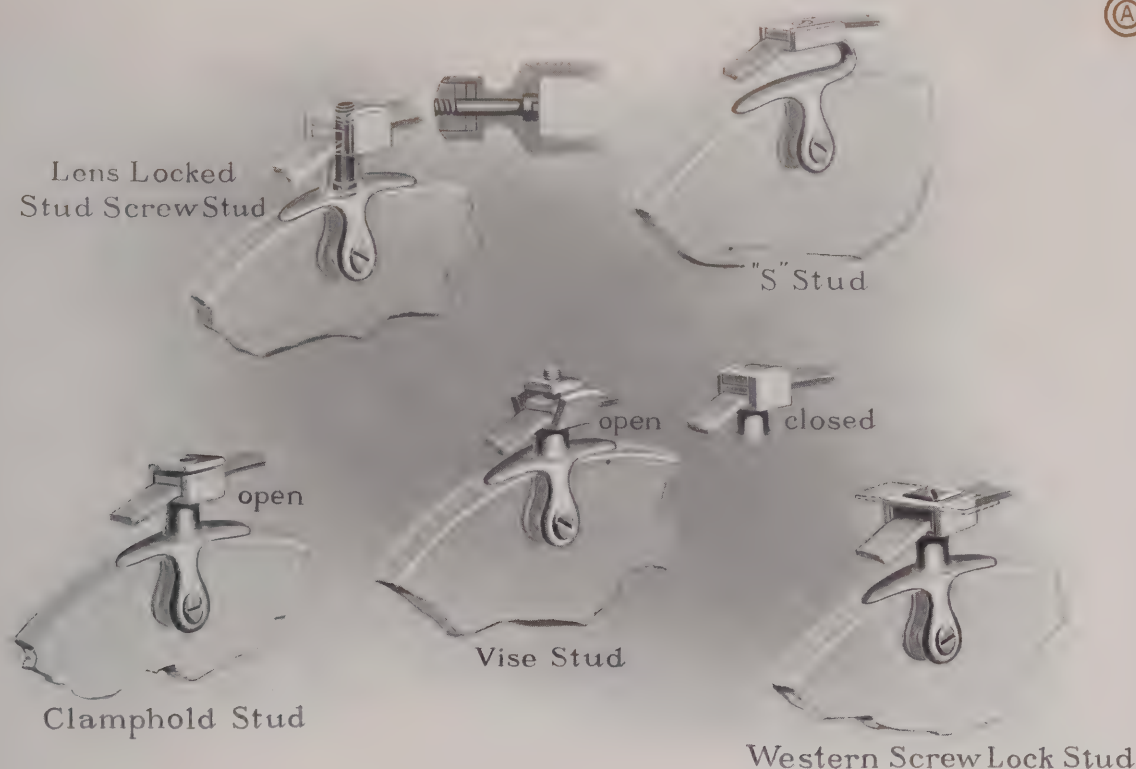
Ajax Strap (Patented.) Supplied on any form of rimless studs or spectacle mountings, they commend themselves to dealers by reason of the fact that with this construction it is unnecessary to carry a stock of different strap widths. By their construction, liability of breakage of lenses is reduced and loosening of glass screws is prevented.

Countersunk Stud Screw Studs C. S. S. S. These differ from the regular open studs only in that they are fitted with countersunk blocks which surround the heads of the stud screws, giving the desirable flush finish.

AOCO Lock for Stud Screws (Patented.) By the use of a thin plate or washer having extending tips and the employment of a six-sided head stud screw, it is possible to effectually lock the screw after it has been driven in. The washer is placed between the screw head and the guard. When the screw has been tightened, one of the tips of the washer is bent up against one of the flat sides of the screw head. This can be supplied with any open studs when so ordered.

Ideal Post Screw Lock (Patented.) A screw having a large five-sided head is used in an open stud, the sides of the stud having been first spread apart to permit turning. After screw is driven in, the sides are bent back effectually locking the screw.

Square-head Screw Lock (Patented.) This is the same as our Ideal Post Screw Lock, described above, except that a square-head screw instead of a five-sided head screw is used.



EYEGLOSS STUDS

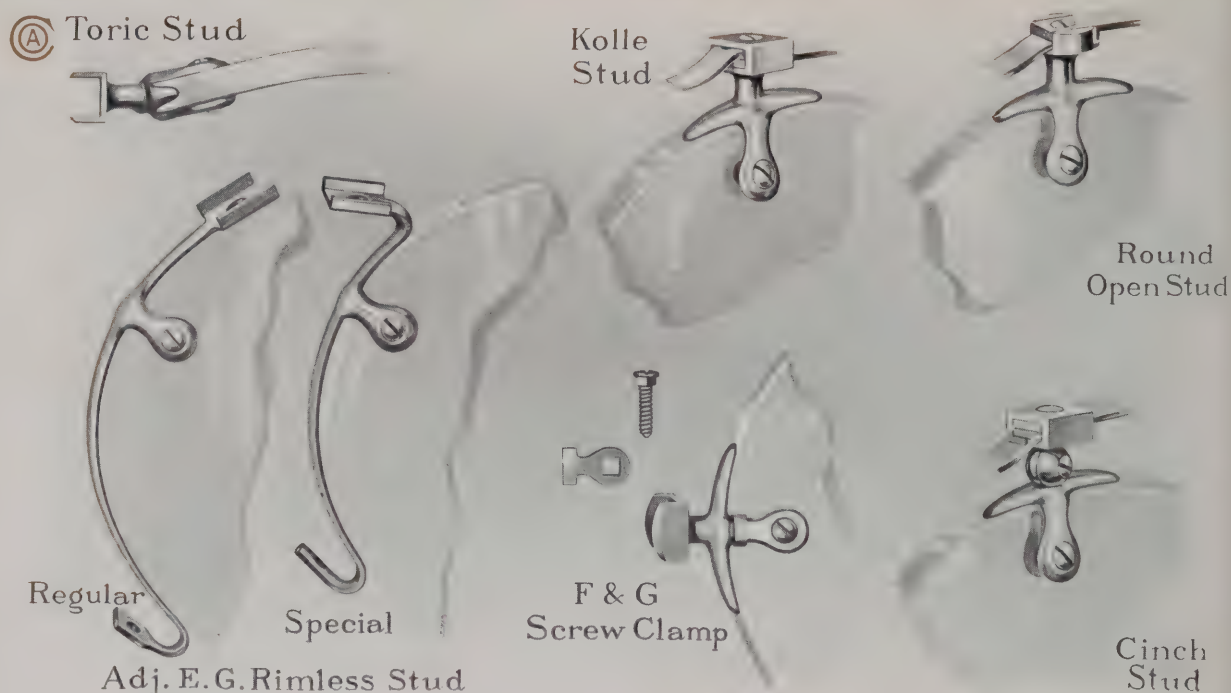
Lens Locked Stud Screw Studs (Patented.) The stud screw is inserted from the under side of the post between the straps, before the lens is put in. A block is used to make a flush finish at top of stud and the point of the screw is finished even with the surface of block.

"S" Studs These are a form of studs which are provided with an open box formed continuous and integral with one of the lens arms. This arm is very light and susceptible to many special adjustments. "S" Studs are sometimes supplied with a loop post, as illustrated in Fig. 1, page 177.

Clamphold Studs (Patented.) An improved form of box stud slotted on one side. When stud screw is tightened top of box is drawn tightly up against the back wall of the stud, preventing any loosening of parts. The head of the stud screw is countersunk in the top of the stud and makes a perfectly smooth finish.

Vise Studs (Patented.) These studs are provided with a screw soldered to the post, the sides being spread apart. Spring and guard are placed over the screw and a square nut is screwed down tight, after which the sides are bent up against the nut, making it impossible for the nut to turn. For this purpose we supply a special form of screw driver having a rectangular recess in the end to receive the nut, see Machinery Section.

Western Screw Lock Studs (Patented) In connection with a stud having a plate on the end of the post and no projecting sides, there is supplied an oblong cap plate with square-head screw countersunk flush with its outer surface. This is screwed down tight over spring and guard after which the sides of the cap plate are bent down over the parts so that the screw is effectually locked and cannot turn or loosen.



EYEGLOSS STUDS

Toric Studs The more general use of toric and meniscus lenses has caused a demand for an angular form of eyeglass stud known as the "Toric Stud". In this the post is soldered at such an angle that when mounted with toric or meniscus lenses the lenses will line up in the correct vertical plane. Toric studs may be supplied in the regular styles, box or open forms.

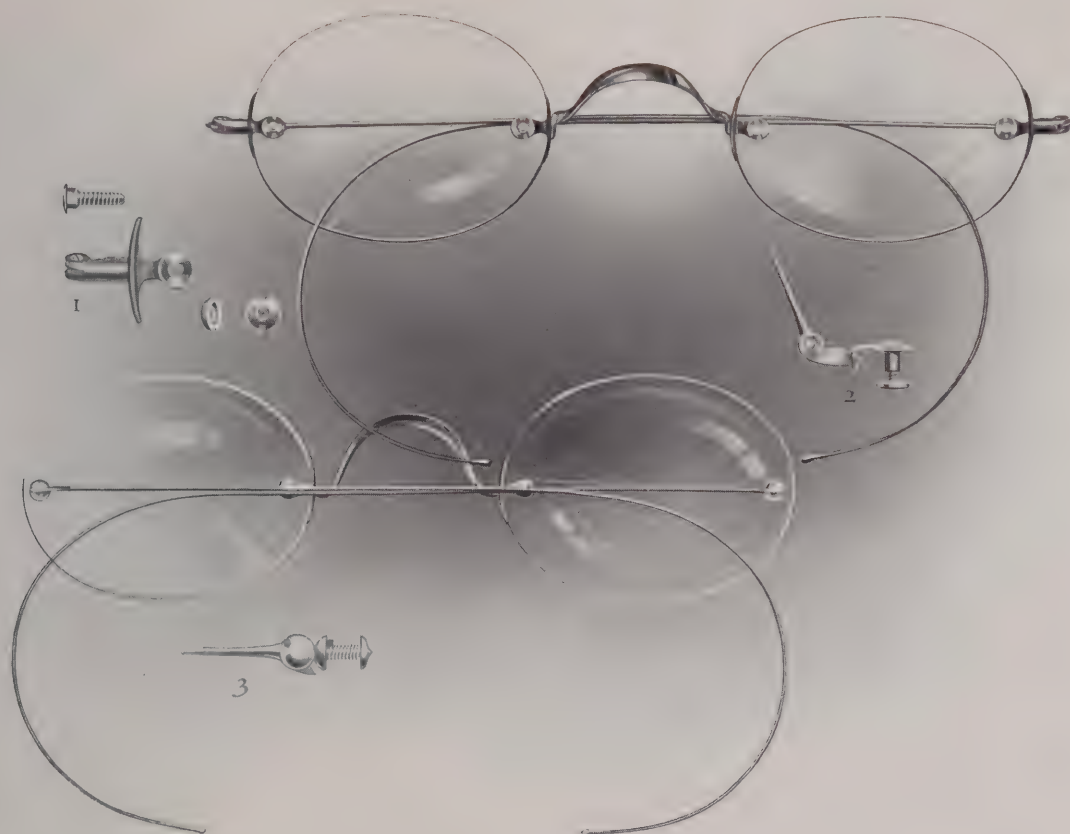
Adjustable Eyeglass Rimless Studs Sometimes designated as "Rimless Trimming". This construction makes possible the use of adjustable eyeglass guards in rimless mountings.

Kolle Studs (Patented.) A small tongue of metal drawn out from lower edge of screw hole in the end of a Kolle patent guard engages in a recess made from drawing a similar projection from a Kolle patent spring. These projections interlock, the one on the end of spring engaging in a recess cut in the bottom of a box stud. This provides a simple means of preventing the loosening of parts. See description, page 166.

"F and G" Screw Clamp (Patented.) This is a small clamp or washer having two projecting arms on one side and provided with a square hole. A special square shoulder glass screw is used and inserted first through the clamp and then in any regular rimless straps in the usual manner. After screw is tightened the projecting arms are bent down around neck of lens strap, thus preventing the glass screw from turning.

Round Open Stud This form is a departure from the regular open and box styles. As shown in illustration, sides of box are rounded although the regular standard gauge recess is provided and stud is assembled with spring and guard in the usual manner.

Cinch Stud This stud is a modification of the box stud. The post is made ball-shaped and split. To open, the screw is removed from the ball and the box is bent open. A depression in end of box forms a lock for guard hole on the inside and a small extending point inside of box from post similarly locks the spring. When box is closed over guard and spring and post screw driven in, the mounting is exceptionally tight.



AJAX STRAP.—PATENTED

Illustration No. 1

The peculiar construction of this strap tends to reduce the breakage of lenses. The inner surface of the strap, and also of the washer, is concave, so that the actual contact with the lens is confined to the outer edge of the circle, thus preventing the leverage of the screw on the glass around the hole, and transferring the strain to the flat unbroken surface of the lens. The outer surface of the strap is countersunk, to fit the under surface of the head of the screw, which is rounded, thus admitting of a rocking motion, making it unnecessary that the screw stand at exactly right angles to the strap. In ordering, the specification "Ajax" should follow the catalogue number, and may be applied to any spectacle or eyeglass mounting, except No. 860 styles. See page 170 for description of Ajax Stud.

BOYD AJAX STRAP.—PATENTED

Illustration No. 2

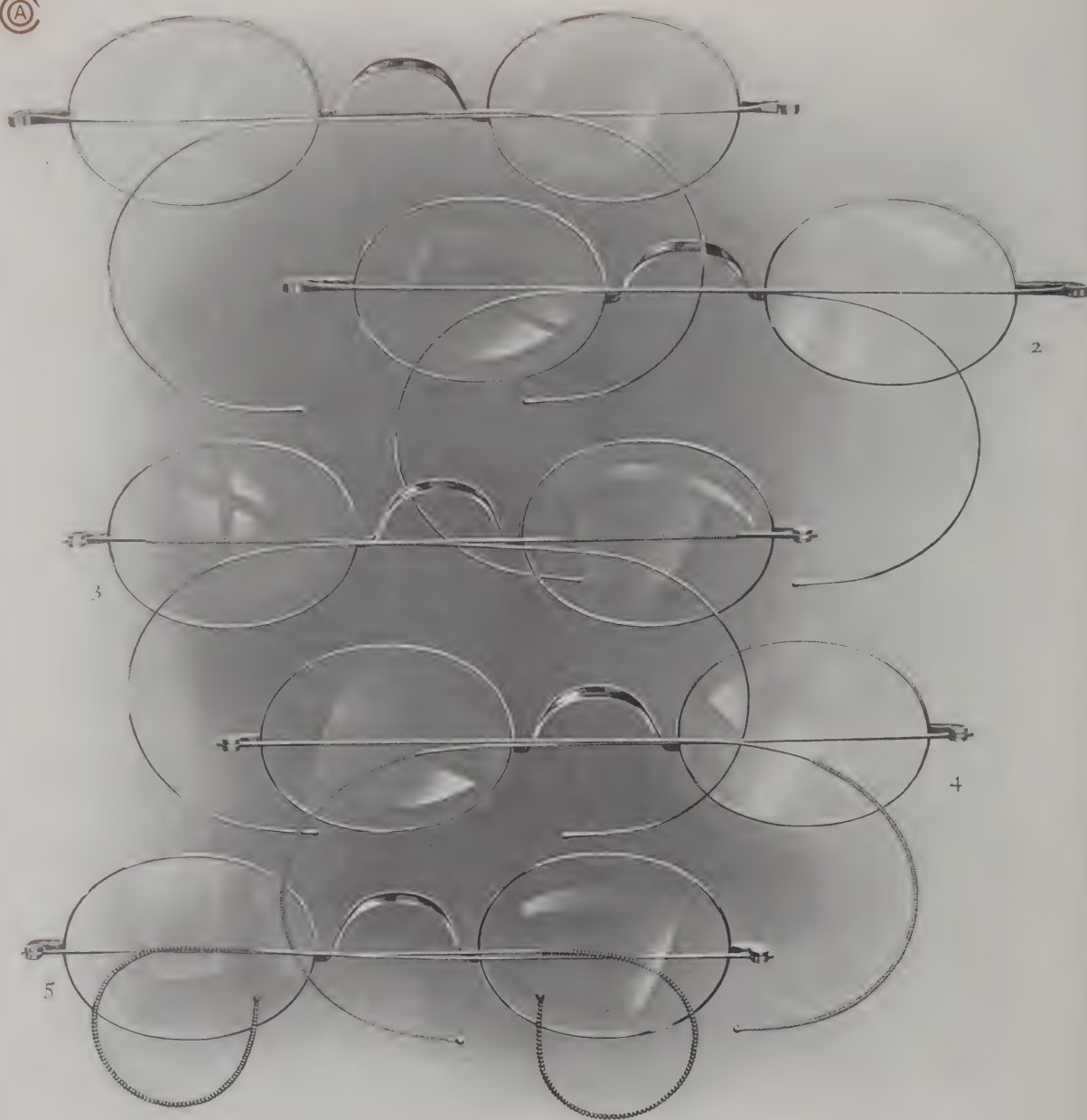
The Boyd patent is a modification of the Ajax single arm strap construction, having a threaded tube attached to the arm of the strap into which the special large head glass screw is fitted. The tube not only provides a large frictional surface for the screw, but it is intended particularly to extend through the hole very slightly beyond the opposite surface of the lens. When the glass screw is driven in, its head rests against the end of the tube and there is consequently no tension from the screw head upon the glass. This also overcomes to a large degree the tendency of the glass screw to work loose. In ordering, specify "Boyd Ajax".

MANSFIELD MOUNTINGS.—PATENTED

Illustration No. 3

The Mansfield mounting is desirable in cases with a narrow temple distance. The lens is drilled to admit the mounting in the manner shown in the illustration. It is securely held in place by means of an Ajax washer. In ordering, specify "Mansfield", following the catalogue numbers 798, 798 1/2, etc.

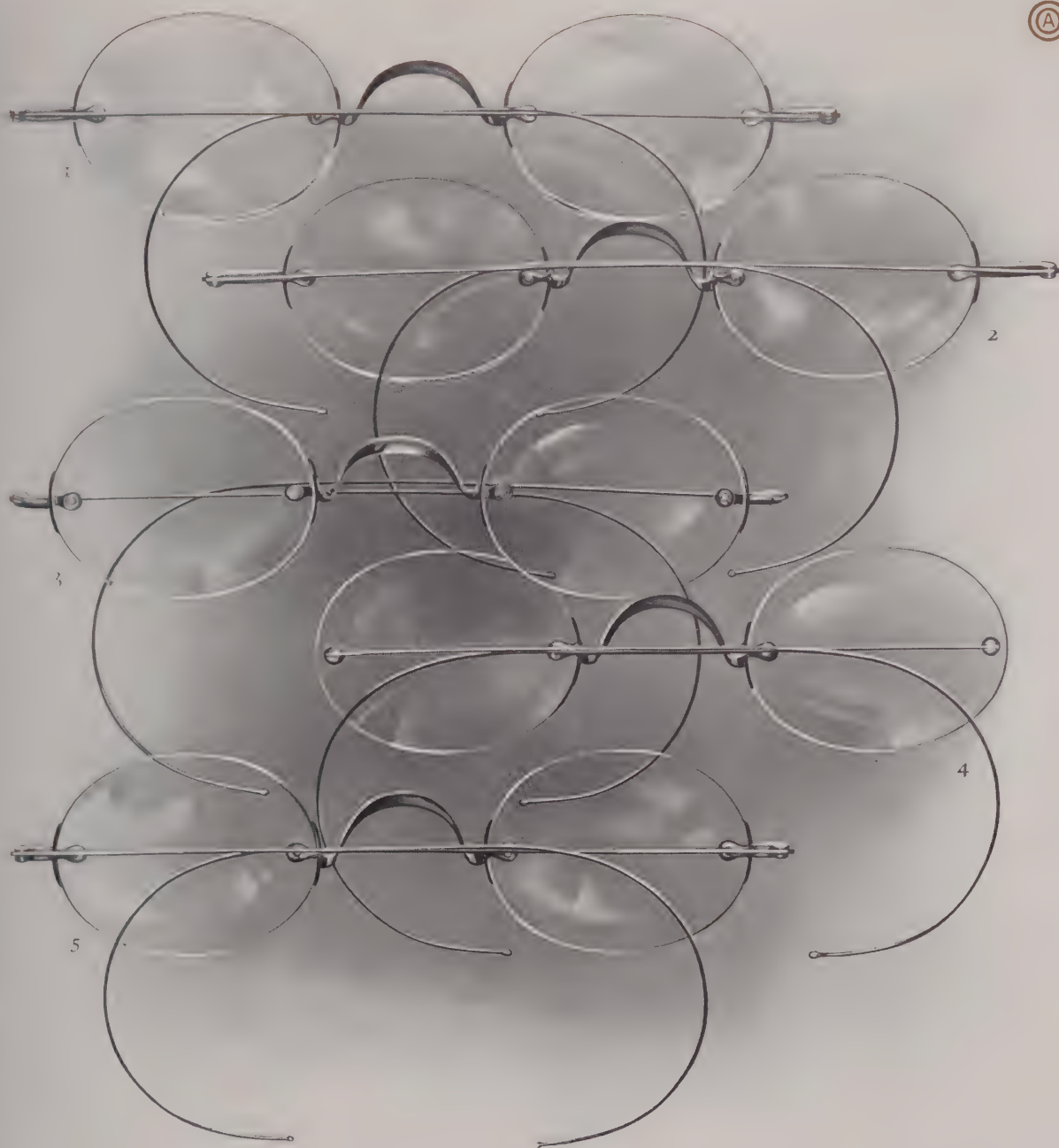
We supply spanners made especially for attaching washers on Ajax and Mansfield mountings. See Machinery Section.



SOME SPECIAL FEATURES APPLICABLE TO SPECTACLE FRAMES

1. Long End Piece (adds 6.5 mm. to temple width)
2. Extra Long End Piece (adds 9.5 mm. to temple width)
3. Spiral Butt Temples
4. Spiral Shield Temples
5. Spiral Tip Temples

For other special details of Spectacle Frames, see previous pages.



SOME SPECIAL FEATURES APPLICABLE TO SPECTACLE MOUNTINGS

1. Long End Piece (adds 6.5 mm. to temple width)
2. Extra Long End Piece (adds 9.5 mm. to temple width)
3. Ajax Straps
4. Mansfield Temple (for narrow P. D.)
5. Square Butt Temples

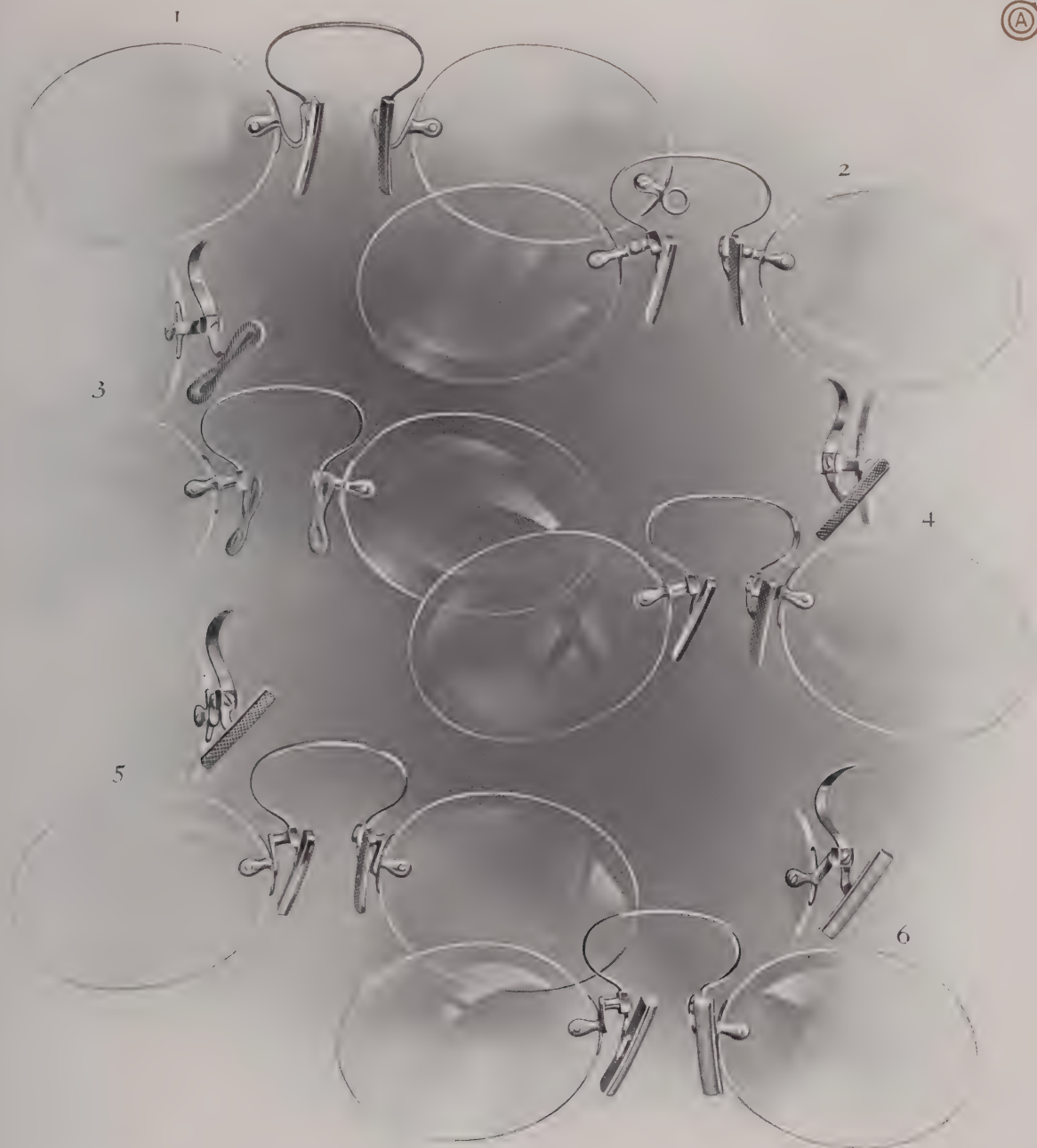
For other special details of Spectacle Mountings, see previous pages



SOME SPECIAL FEATURES APPLICABLE TO EYEGLASS FRAMES

1. Hoop "H" Spring and Zylonite Guards
2. "S" Spring reduced (R), patented, and 5 mm. light Zylonite Guards
3. Regular Spring and No. C-1 Shark Skin Guards, patented
4. Tilting Spring and No. C-1 Sanitary, Riveted Arm Guards
5. Regular Spring and Segment Guard

For other special details of Eyeglass Frames, see previous pages.



SOME SPECIAL FEATURES APPLICABLE TO EYEGGLASS MOUNTINGS

1. "S" Studs and "BH" ring handle
2. "D" Studs, lenses drilled 2 mm. above center
3. "B" Studs, "Inset", C-1 double slip-not guard, to set lenses away from face
4. "B" Studs, "Outset", to set lenses toward face
5. "B" Studs, "Upset"
6. "B" Studs, "Diagonal Upset"

For other special details of Eyeglass Mountings, see previous pages.



4024



4016

M158

SCREWS AND TAPS

We cannot too strongly emphasize the importance of using accurate optical screws. Screws in themselves are such small material that one is too apt to take their accuracy for granted or to consider it of slight importance. The manufacture of optical screws is always undertaken with automatic screw making machines. Unless these machines are of the highest type, accurately adjusted and calibrated, the production of perfect optical screws is impossible.

In manufacturing optical screws we found that most of the commercial screw machines usually employed were not altogether satisfactory for the fine work required, and we were accordingly obliged to design and build our own equipment for this purpose. As a result, we are enabled to market a screw product of uniform and guaranteed accuracy in gauge, length, thread and temper. The use of AOCo screws for optical goods means much to us as manufacturers, as it insures perfectly finished optical goods. It means as much more to the trade to use AOCo guaranteed screws, as it insures perfect prescription and repair work.

SYSTEM OF NUMBERING

On page 180 we give a list of screws which are required for daily repair work in busy shops. It will be noted that each style of screw is given a catalogue number corresponding to the number of the style of AOCo goods in which it is most generally used. The catalogue numbers of other goods for which these screws may be used are given in addition. After each style of screw we give the number of the tap, which has a corresponding thread. Taps and screws should be ordered by these numbers.

The use of the plus (+) sign in connection with the catalogue numbers of AOCo optical screws and screw taps indicates gauge slightly larger than regular, for repair work.

Attention is called to the Ideal Screw Assortments and Universal Screw Tap Set described below and illustrated on the opposite page.

THE IDEAL JUNIOR SCREW ASSORTMENT. No. 4016

This consists of a cloth-covered wooden case having sixteen separate compartments in each of which is placed a small screw-cap bottle containing an average dozen pairs of screws. The complete contents of this set is as follows:

Nos. 70, 716, 798, 1010, 1338 and 1638	- - - - -	End Piece Screws
Nos. 490, 490+, 593, 593+	- - - - -	Stud Screws
Nos. 590, 1790 and 1790+	- - - - -	Glass Screws
No. 881	- - - - -	Guard Screws
No. 3101	- - - - -	Finger-piece Screws

Two sizes Temple Washers and one size Finger-piece Washers.

THE IDEAL SENIOR SCREW ASSORTMENT. No. 4024

This consists of a set similar to No. 4016, described above, but containing 24 bottles and as many different kinds of screws, with three times the quantity of screws. The complete contents is as follows:

Nos. 70, 716, 720, 798, 1010, 1338, 1638	- - - - -	End Piece Screws
Nos. 1735, 1726	- - - - -	Ball End Piece Screws
Nos. 490, 490+, 593, 593+, 1793, 1793+	- - - - -	Stud Screws
Nos. 590, 590+, 1790, 1790 L, 1790+	- - - - -	Glass Screws
No. 881	- - - - -	Guard Screws
No. 3101	- - - - -	Finger-piece Screws

Two sizes Temple Washers and one size Finger-piece Washers.

The bottles in the above sets have catalogue numbers of their contents blown into the glass for ready identification. In the cover of each box is a list of contents and on the reverse side of the circular is given a complete list of AOCo goods for which the screws can be used.

THE UNIVERSAL SCREW TAP SET. No. M 158

This consists of a set of five screw taps in holders ready for use. These holders are marked plainly with the catalogue numbers of the screws for which they are most used and are supplied in a round wooden holder or block, which will be found a great convenience for use on the work bench. The following screw taps are supplied:

Nos. 70 490, 490+, 590 and 590+

See page following for list of screws for which these taps may be used.

See Machinery Section for screw plates used for re-threading screws.

AOC_o SCREWSTable giving catalogue numbers of goods for which AOC_o Screws may be used. See description on preceding pages

No. 70 END PIECE SCREWS, USED FOR (No. 70 TAP)										
1C	70	123	163	243	308	328	348	450	493	1081
3C	80	133	183	248	316	336	376	460	500	1181
5C	103	143	200	253	318	338	378	480	513	1361
6C	113	150	206	273	326	346	440	490	520	1381
No. 716 END PIECE SCREWS, USED FOR (No. 490 TAP)										
702	708	718	726	766	803	Handle	903	1558G	1668GL	
700	710	719	728	768	901		908			
No. 720 END PIECE SCREWS, USED FOR (No. 490 TAP)										
	703	711	713	721	723	731	733	741	742	743
720	710	712	720	722	730	732	740			
No. 798 END PIECE SCREWS, USED FOR (No. 590 TAP)										
790	793	798	799	1398	1399	1599	1659	1668	1669	1699
792										
No. 1010 END PIECE SCREWS, USED FOR (No. 70 TAP)										
	1004	1010	1041	1110	1301	1308	1316	1318	1341	1413
1000	1001	1016	1100	1116	1306	1311	1317	1331	1344	1418
1001	1008	1018	1106	1118	206 Style E. P.					
No. 1338 END PIECE SCREWS, USED FOR (No. 490 TAP)										
133	351	366	1243	1322	1326	1328	1338	1348	1358	1448
228	358	368	1248	1323	1326L	1333	1343	1353	1443	
No. 1638 END PIECE SCREWS, USED FOR (No. 490 TAP)										
1513	1528G	1553	1613	1622	1628	1638	1646	1646G-21	2558	3553
1523	1543	1558	1618	1623	1628G	1643	1646-21	2553	2938	3558
1528	1540									
No. 1735 BALL END PIECE SCREWS, USED FOR (No. 490 TAP)										
835	837	1236	1375	1377	1716	1735	1736	1741	1746	1747
830	1235	1237	1376	1711	1717	1735L	1737			
No. 1726 BALL END PIECE SCREWS, USED FOR (No. 490 TAP)										
801	827	834	850	853	863	881	1529	1722	1727	1723
803	831	839	851	861	871	883	1721	1726	1728	1730
813	833	841	852	862	873					
No. 490 STUD SCREWS (No. 490 TAP)										
No. 490+ STUD SCREWS, LARGE SIZE, FOR REPAIR, USED FOR (No. 490+ TAP)										
440	490	513	523AA	803	871	1066	1181	1361	1381	1723
450	491	520	527	812	881	1081	1186	1362	1386	1720
460	493	521	543	813	883	1086	1266	1363	1393	1728
470	500	522	593A	861	1061	1163	1267	1366	1721	1722
480	503	523	801	862	1063	1166	1286	1371	1793A	
481	512									
No. 593 STUD SCREWS (No. 490 TAP)										
No. 593+ STUD SCREWS, LARGE SIZE, FOR REPAIR, USED FOR (No. 490+ TAP)										
570	590	890	893	1190	1197	1293	1390	1393	1700	1793
580	593									
No. 1793 BOX STUD SCREWS (No. 590 TAP)										
No. 1793+ BOX STUD SCREWS, LARGE SIZE, FOR REPAIR, USED FOR (No. 590+ TAP)										
580	583	590	593	890	891	893	1790	1791	1793	
No. 590 GLASS SCREWS (No. 590 TAP)										
No. 590+ GLASS SCREWS, LARGE SIZE, FOR REPAIR, USED FOR (No. 590+ TAP)										
380	398	560	573	583	590	599	1390	1393	1398	1399
385	390	570	580							
No. 1790 GLASS SCREWS (No. 590 TAP)										
No. 1790L GLASS SCREWS, LONG (No. 590 TAP)										
No. 1790+ GLASS SCREWS, LARGE SIZE, FOR REPAIR, USED FOR (No. 590+ TAP)										
1190	1197	1599	1668	1699	1790	1793	2599	2669	2690	3590
1103	1203	1659	1669							
No. 1399 AJAX GLASS SCREWS, USED FOR (No. 590 TAP)										
	583 Ajax		1399 Ajax		1599 Ajax, etc.					
No. 881 GUARD SCREWS, USED FOR (No. 590 TAP)										
460	500	560	834	861	881	1081	1181	1286	1386	1726
480	503	563	839	863	981	1086	1186	1381	1716	1796
481										
No. 3101 FINGER-PIECE SCREWS, USED FOR (No. 590 TAP)										
	3101	3103	3111	3113	3123	3171	3181	3201	3301	Etc.

W-WASHERS, ASSORTED SIZES

Other style screws as, No. 1761 Bolster End Piece, No. 893B Lens Lock, No. 523 D. P., Nos. 590 and 1790 Countersunk Stud Screws, No. 809 Gold Glass Screws, No. 1375 Guard Screws, etc. may be regularly supplied on order



Steel Goods Soft Metal Goods Gold Goods Glass Screws Dowels Temple Washers Large Temple Washers Small

MISCELLANEOUS MATERIAL

The material listed below is regularly carried in AOCo stock and is supplied through representative wholesalers in such quantities as may be required.

Ferrules or short pieces of tubing used for repairing broken temples. Supplied in gold, gold-filled and white metal.

Temple Washers in white metal, furnished in two sizes, small and large, for tightening temples.

Rubber Tubing for Temples made in white rubber and furnished in any length desired. Three sizes, small, medium and large.

Celluloid Ball Tips for temples. Drilled, supplied in white only.

Bridge Blanks supplied in any metal and quality. Furnished bent and milled, unbent regular lengths, or unbent cut to exact lengths.

Cork Pads round, for guards.

Zylonite Pads round, for guards. Edges of pads are turned in and convex surface is corrugated, hole drilled in center for riveting. State color desired in ordering.

Zylonite Facing for guards, in all regular shapes for AOCo Guards, or furnished in strips of any size desired for this purpose. Corrugated one side. State color desired in ordering.

Shark Skin Facing for guards, in irregular sized pieces. (Patented.)

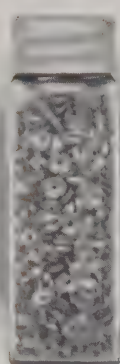
Bailey Rubber Facing for guards, same as regularly used on Bailey Rubber guards, see pages 163 and 165. Furnished in strips, size and length as required. (Patented.)

Rivets for Zylonite Guards furnished in gold, white and yellow metal.

Cork-Guard Straps These are metal backs for cork guards, furnished in gold, gold-filled and white metal.

Backs for Cork Adjustable Eyeglass Guards Made of very thin steel strips and used between the cork facing and guard straps. State catalogue number of guard in ordering backs. These strips give sufficient temper to the guard for adjustment.

Caps for Lower Part of Adjustable Eyeglass Guards Made in gold and gold-filled.



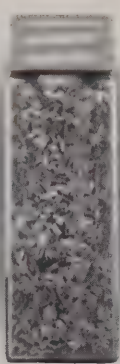
Ajax



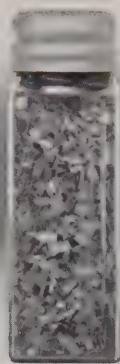
Lens Washers



Fine Solder



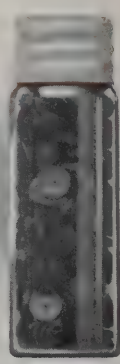
Medium Solder



Coarse Solder



Ferrules



Zylonite Pads

MISCELLANEOUS MATERIAL

Lens Lock Stud Blocks finished. Used in connection with Lens Locked Studs, see page 171.

Nuts for Vise Studs Used in connection with Vise Studs, see description, page 171.

"F and G" Screw Clamps for locking glass screws, see page 172. (Patented.)

AOC Co Stud Screw Lock Washers See description of AOC Co Lock for Stud Screws, page 170.

Ajax Washers furnished in gold, gold-filled and white metal. See description of Ajax Strap, pages 170 and 173.

Mansfield Washers furnished in gold, gold-filled and white metal. See description of Mansfield Mounting, page 173.

Screw Dowels for frameless end pieces. Made for gold, gold-filled and white metal goods, straight or tapered.

Screw Taps for tapping Studs, Straps, etc. See Machinery Section; also pages 178 and 179, this section.

Broaches See No. M 109, Machinery Section.

Catches for Nos. 590, 599, 690, 890, 1196, 1399, etc.

Catch Pins only, for attaching to handles of folding eyeglass. Supplied in gold, gold-filled and white metal.

Silver Solder for repair work, furnished in sheet form, wire form or cut in three sizes: fine, medium and coarse.

Gold Solder furnished in three qualities for 8k, 10k or 14k goods, cut fine, medium and coarse.

Dowels for spectacle frame end pieces, made in all sizes for AOC Co goods. Specify catalogue number of goods in ordering.

Lens Washers These are strips of grooved metal which fit the groove of eyewire, for use when lens has been ground slightly small for the eye of frame. We can furnish a special tool for stretching eyewire when lens is slightly large. See No. M 209, Machinery Section.

Chain Material See Eyeglass Chain Section.

Material for Trial Frames See Trial Set Section.

Finger-piece Eyeglass Screws, Washers, etc. See Finger-piece Eyeglass Section.

AUTOMOBILE GOGGLES DRIVING AND SHOOTING SPECTACLES





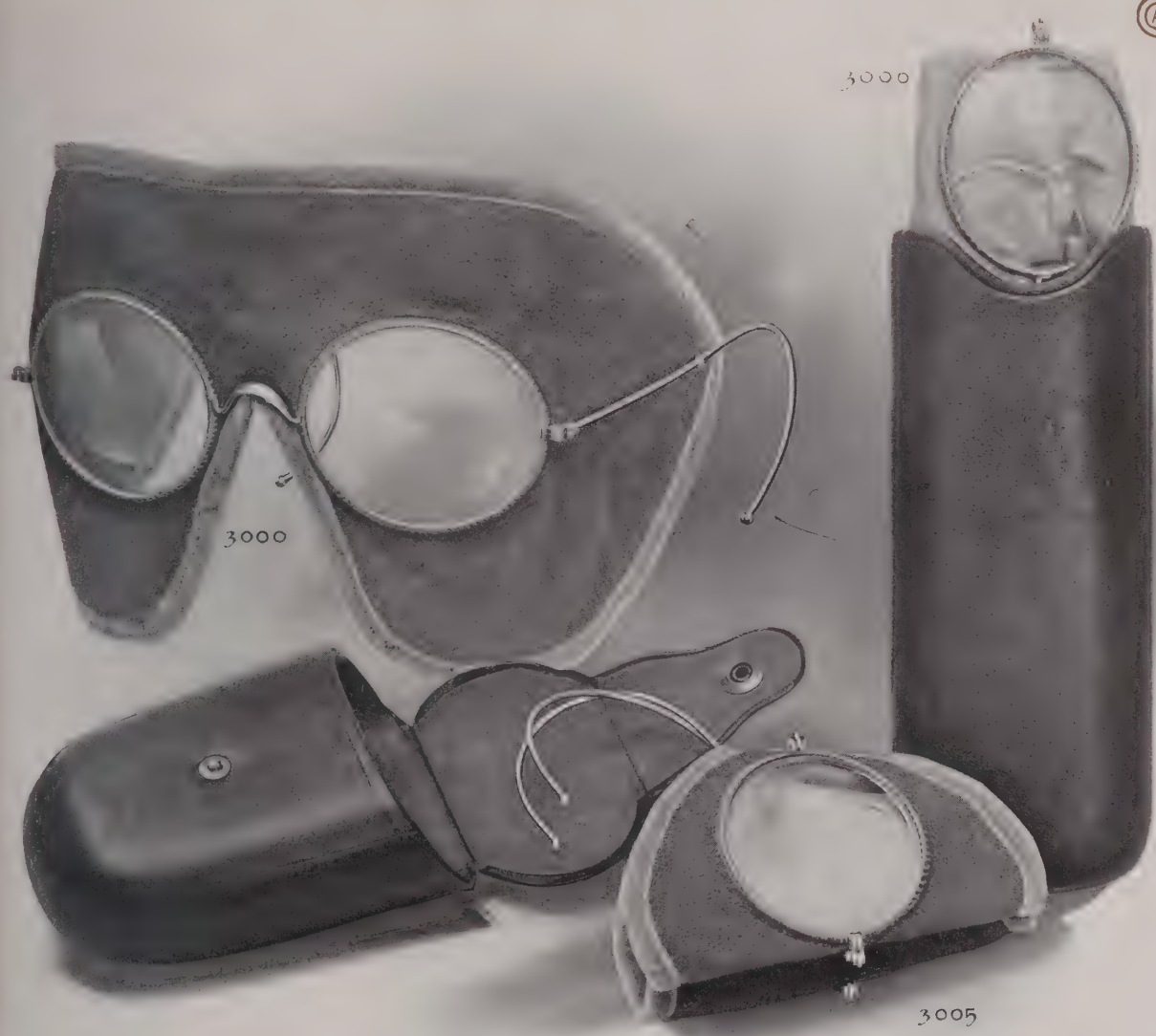
AUTOMOBILE GOGGLES, DRIVING AND SHOOTING SPECTACLES

Automobile Goggles The motoring public is very discriminating as a class. Automobilists have become keenly alive to the fine points of construction in cars and in all accessories necessary for personal comfort, convenience and safety. From the very beginning the American Optical Company has stood out for the highest quality in automobile goggles. In the face of a market flooded with inferior goods at absurdly low prices, we have been able not only to entirely ignore such competition, but have steadily gained prestige with a public that has become more and more exacting in its tastes and requirements. Our goggle business, built up gradually upon such a solid foundation, has grown to become a very important department of our great organization. Success in this branch is the more gratifying as an indication that our efforts to maintain a high standard in this work are heartily supported by the optical trade and the motoring public.

Driving Spectacles For many years we have made a line of driving spectacles, which have always been one of our leading specialties. These are shown on page 188. In addition we manufacture frames with very large eyes, suitable for driving or motoring, some of which are illustrated in the Steel Section, pages 100 and 101.

Shooting Spectacles On pages 189 and 190, we show styles of spectacles especially adapted to the requirements of sportsmen. The clear and unobstructed visual range make these goods peculiarly suited for trap and wing shooting. Attention is called to the large, patented self-closing case, No. 367, illustrated on page 189, designed for holding these spectacles.

Goggle Lenses We are splendidly equipped to supply our goggles fitted with any of the popular colors and shades in flat or curved lenses. We use only selected glass for this work and our goggle lenses are notably clear and perfect. The colors regularly carried in stock for goggles are White, Smoke (all shades), Amber (light and dark), and Euphos. White and Smoke lenses are regularly carried in Coquille form as well. Additional information relative to Goggle Lenses will be found in the Lens Section, page 228.



AUTOMOBILE GOGGLES

CATALOGUE NUMBER

DESCRIPTION

Cable Temple, White or Smoke, Plano, Coquille or Curved Lenses. Eye Size : 50.5 x 41.5 mm.

Rigid Bridge		Folding Bridge				
3000 G		3005 B	-	-	-	
3000 S		3005 G	-	-	-	
3000 W		3005 S	-	-	-	
		3005 W	-	-	-	
						Brown Leather Mask
						Grey Leather Mask
						Pongee Silk Mask
						Waterproof Silk Mask

Above Goggles furnished with Rubber Tubing over Temples when so ordered.
Above Goggles will fit cases Nos. 262, 267 and 268. See Spectacle Case Section. Cases are not furnished with goggles unless order so specifies



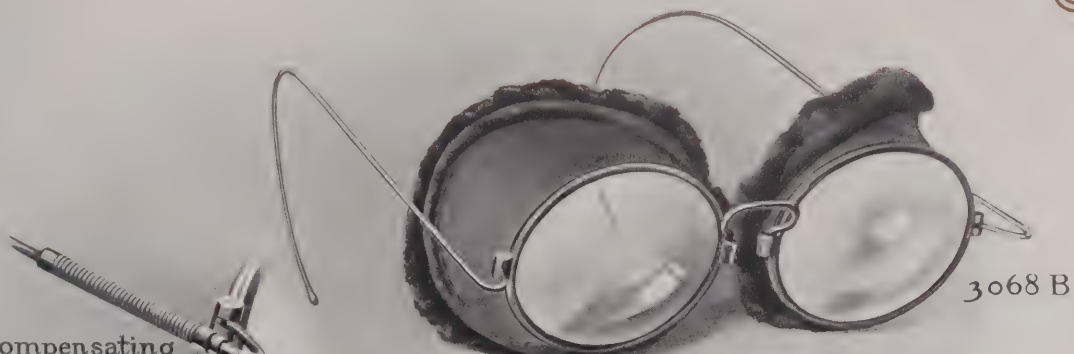
AUTOMOBILE GOGGLES

CATALOGUE NUMBER						DESCRIPTION						
White, Smoke or Amber, Flat or Curved Lenses.						Eye Size : 59.5 x 54.7 mm.						
With Face and Nose Mask		With Face Mask		With Small Mask		Without Mask						
3060 B	-	-	3050 B	-	-	3055 B	-	-	3056 B	-	-	Brown Leather
3060 G	-	-	3050 G	-	-	3055 G	-	-	3056 G	-	-	Grey Leather
			3050 S	-	-	3055 S	-	-	-	-	-	Pongee Silk
3060 W	-	-	3050 W	-	-	3055 W	-	-	-	-	-	Waterproof Silk

Above Goggles will fit Goggle Case No. 387. See Spectacle Case Section.



Compensating
Cable Temple



3068 B



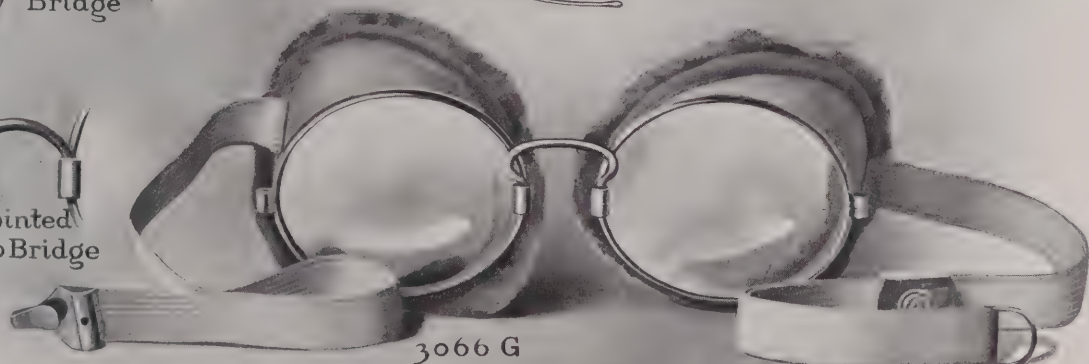
Hoop
Bridge



3068 B
(Closed)



Jointed
Hoop Bridge



3066 G



3066 G
(Folded)

AUTOMOBILE GOGGLES

CATALOGUE NUMBER

DESCRIPTION

Oblong Folding Bridge, White, Smoke or Amber, Flat or Curved Lenses. Eye Size, 39.5 x 49.5 mm.

With Elastic Headbands

3066 B
3066 G

With Temples

3068 B
3068 G

Brown, Chenille Trimming
Grey, Chenille Trimming

"Hoop" Bridges can be supplied, folding (oval wire) or rigid style when so ordered.

No. 3068 supplied with heavy Compensating Temples when so ordered, see illustration above.

Above Goggles, Nos. 3066 and 3068, will fit cases Nos. 386 and 387 respectively. See Spectacle Case Section



DRIVING, AUTOMOBILE AND PROTECTION SPECTACLES

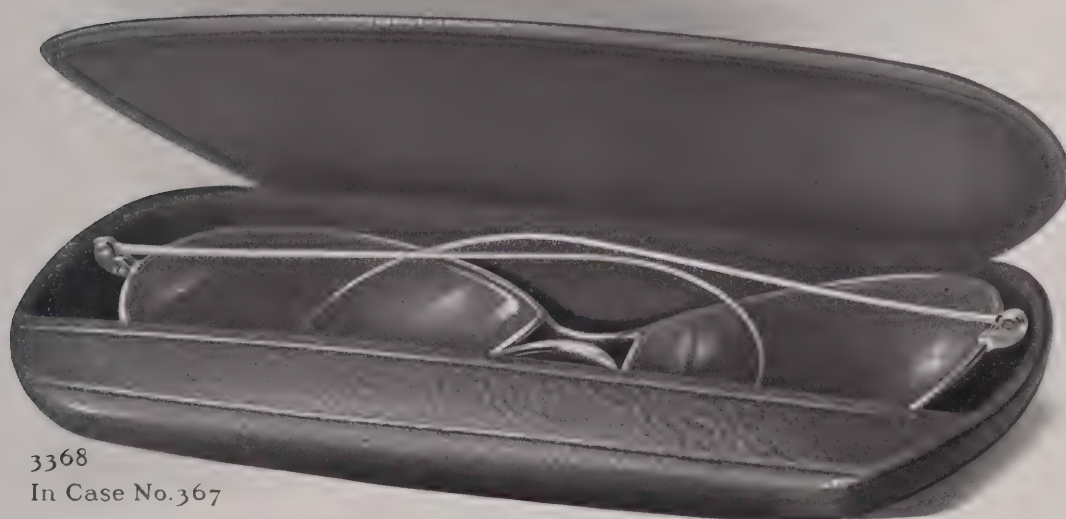
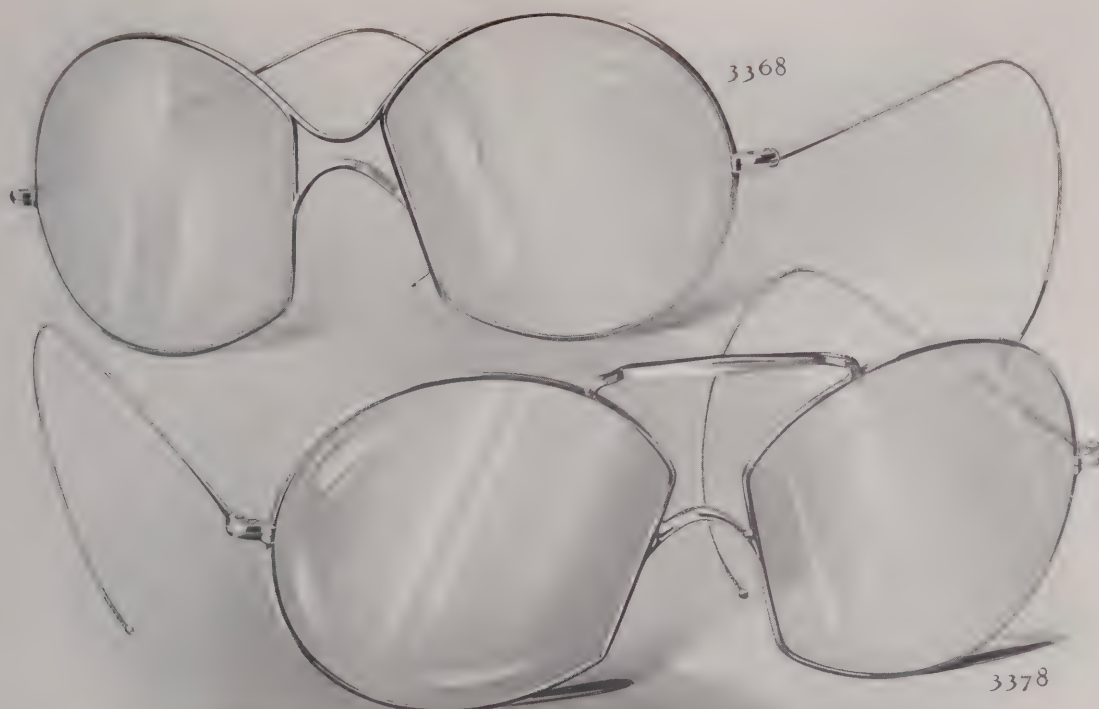
CATALOGUE NUMBER										DESCRIPTION
Folding Screens, White, Smoke or Amber, Plano, Coquille or Curved Lenses										
Cable Temple					Combination Temple					
3026	-	-	-	-	3028	-	-	-	-	Large Eye (50.5 x 41.5 mm.)
3026 1/2	-	-	-	-	-	-	-	-	-	Large Eye (50.5 x 41.5 mm.), Reversible Temples
3027	-	-	-	-	-	-	-	-	-	oo Eye
3027 1/2	-	-	-	-	-	-	-	-	-	oo Eye, Reversible Temples
Riding Temple										Large Round Eye, Reversible Temples
3029	-	-	-	-	-	-	-	-	-	Heavy coarse mesh screen, for steel mill workers

Above Spectacles will fit Spectacle Cases Nos. 272, 277 and 278. See Spectacle Case Section.
Specify form and color of lenses wanted.

AUTOMOBILE GOGGLES

CATALOGUE NUMBER										DESCRIPTION
"Four-Way", Double Horseshoe Eye, Gilt Finish, White, Smoke or Amber Lenses										
3030 B	-	-	-	-	-	-	-	-	-	Brown Leather Mask
3030 G	-	-	-	-	-	-	-	-	-	Grey Leather Mask
3030 P	-	-	-	-	-	-	-	-	-	Genuine Pigskin Mask
3030 I	-	-	-	-	-	-	-	-	-	Imitation Pigskin Mask

Above Goggles will fit Goggle Case No. 387. See Spectacle Case Section.

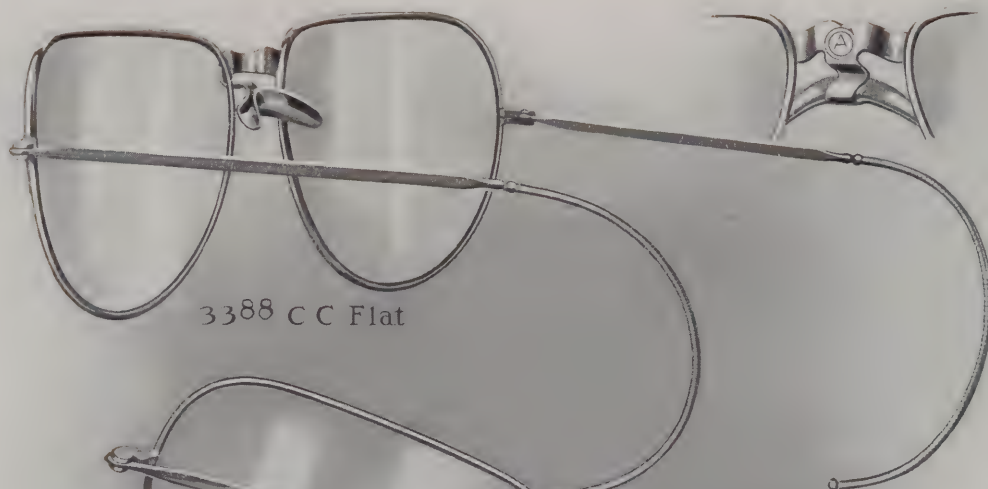


3368
In Case No. 367

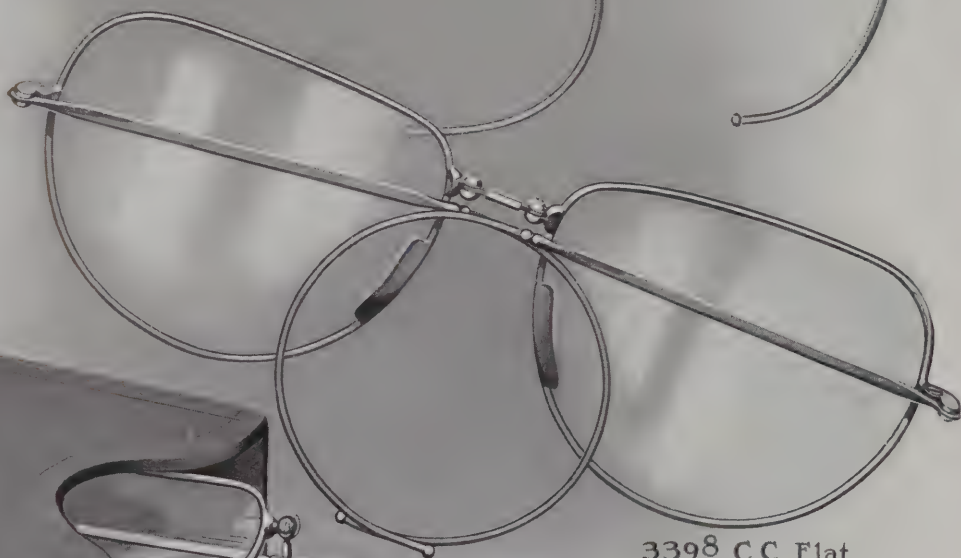
SHOOTING AND AUTOMOBILE SPECTACLES

CATALOGUE NUMBER											DESCRIPTION
Solid Riding Temple, Curved Amber Lenses											
Alumnico	10-12k Gold-filled										
3368	-	-	-	-	-	3668	-	-	-	-	Straight bar
3378	-	-	-	-	-	3678	-	-	-	-	Curved bar

Above Spectacles supplied fitted with lenses unless otherwise ordered. Cable C or Comfort Cable CC Temples supplied when so ordered. Curved Amber lenses regularly supplied. If White or Smoke lenses are desired, order should so specify. Above Spectacles will fit case No. 367, see above illustration.



3388 CC Flat



3398 CC Flat

3398 CC Flat
Folded in 385 Case

SHOOTING AND AUTOMOBILE SPECTACLES

CATALOGUE NUMBER

DESCRIPTION

Solid Riding Temple, Curved Amber Lenses

Alumnico

14-12k Gold-filled

3388

-

-

-

3688

-

-

-

Adjustable Bridge. Patent pending

3398

-

-

-

3698

-

-

-

Folding Style, adjustable nose rests. Patent pending

Above Spectacles supplied fitted with lenses. Cable C or Comfort Cable CC Temples supplied when so ordered. If White or Smoke lenses are desired, order should so specify.

Above Spectacles will fit case No. 367, see page 189. Nos. 3398 and 3698 (Folding Style) will also fit case No. 385. See Spectacle Case Section.

SPECTACLE AND EYEGLASS LENSES BLANKS ETC





SPECTACLE AND EYEGLASS LENSES, BLANKS, ETC.

THE manufacture of spectacle lenses by the American Optical Company was begun in 1883. Prior to that time all such lenses were imported. Annoying delays and the difficulty in obtaining them in sufficient quantity to keep apace with the manufacture of frames, together with the generally unsatisfactory quality of the lenses, forced the American Optical Company into what has since become a most important department of its business. No foreign spectacle lens manufacturers had attempted to apply the idea of interchangeability of sizes and systematic standards of foci to their products. Lenses were set into frames only by slow, tedious and painstaking hand edging. There existed no set standards of surface quality, or center, nor was there even an attempt to employ a raw material of uniform density and clarity.

To-day we have CENTEX lenses representing the most perfect examples of the spectacle lens makers' art. Interchangeable eye sizes—any one of a thousand pairs will fit its corresponding eye size in any frame, absolute and exact focal powers and uniformity in color and index.

This standardization was brought to the highest degree of success because of the general acceptance by the optical public of systems and reforms inaugurated by the American Optical Company. These are accepted the world over to-day, wherever spectacles are made and sold.



Furthermore, by setting certain high standards of quality to be measured by expert inspection and governed by strict supervision, we have succeeded in educating the optical world to expect and accept only the most perfect goods that modern mechanical equipment and scientific efforts can produce.

Lensdale Our plant used exclusively for the manufacture of lenses is located at "Lensdale", about one-third of a mile south of the main works.

The Lensdale plant covers about forty acres of ground. Its buildings are conveniently situated with respect to one another, so that intercommunication and the handling of raw stock and goods in process is a matter of progression without lost time or effort.

There are three main buildings in the Lensdale group, and several subsidiary structures for the purposes connected with this work. The first in importance is the Grinding Department, where the raw glass is blocked, ground and polished.

This building has two floors. The lower floor is devoted entirely to blocking, making of moulds and other operations preparatory to sending the blanks to the second floor for grinding and polishing.



Research Bureau Laboratories



New Lensdale Factory and Power Station

Grinding When the blocks are ready for grinding they are carried up to the grinding room on automatic conveyors and delivered to their respective machines according to the curve and operation required. After being ground and polished the blocks are returned to the lower floor, where the lenses are picked off, washed and sorted for inspection.

This grinding room is in every way ideally adapted to the work that is done there. Lighted by skylights as well as large windows, the work is carried on under perfect conditions of light and sanitation, an important factor in increasing the percentage of Centex lenses produced. The grinding room is 485 feet long and 128 feet wide, and is entirely taken up with grinding and polishing machinery. The construction of the machines permits the operator to stop any one spindle at a time, or an entire machine may be stopped, the machines being driven by independent electric motors, each capable of developing 35 to 55 horse-power.

Each grinding machine extends across the entire floor, being 108 feet long. The number of spindles to a machine depends, of course, upon the curvature of the lenses ground, and varies from 200 to 1000. The total grinding capacity is about 10,000 spindles.

To prevent lenses from "chilling" and thereby becoming loosened from the blocks, this building is provided with a complete hot air system of heating kept in constant operation during cold weather.

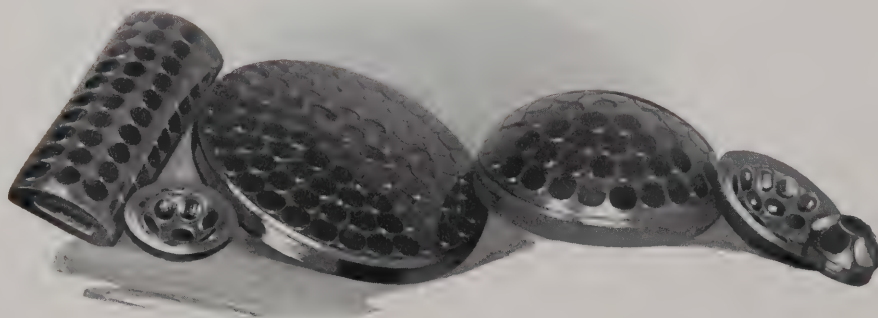
A feature of the work in this department is the grading of emery for the several stages of surface grinding, and for supplying this material to the optical trade. This work requires expertness and judgment which comes of long experience, for the accuracy with which emery grading is done determines the length of time necessary to complete the grinding and polishing operations.

Glass Moulding In connection with the first operations in lens making, one of the most important steps is the moulding of rough glass to the approxi-

mate size and curve of the lenses to be made. This work is carried on in a building devoted exclusively to such work. All high power lenses and lenses having strong base curves, as Meniscus and



Storage of Optical Glass Blanks



Centex Lenses in Process of Making

Toric, Trial Set Lenses, Amoptiscopes and Condensers, etc., are moulded, which saves a great amount of time formerly consumed in "roughing out".

From the grinding plant the lenses are carried by tramway to the new Lensdale building. This building, devoted to inspection and various other operations after grinding, is admirably adapted to the work.

There are four floors devoted exclusively to these operations under ideal conditions. This building was erected farther away from the road than any of our buildings so there would be the least tendency to accumulate dust and foreign particles on the polished surfaces, which is one of the most serious problems with which the manufacturer of lenses must cope. Next in importance is the question of proper lighting for accurate inspection and classification, the result of which determines the *quality* of the finished product.

In this building these two problems have been happily solved, the first, as explained above, by locating the work far from the dust of the street and railroad, and second, by providing exceptional lighting arrangements.

As may be seen on the illustration on page 193, the building is of steel reinforced concrete construction, and, therefore, absolutely fireproof. The side windows are exceptionally large, being 18 feet wide and 14 feet high, extending from floor to ceiling. At the end of the building the windows are even wider, the average width being 22 feet.

During the daytime the interior is almost as light as out-of-doors.

The ground floor contains the intricate automatic machines for bevel and rimless edging. These are so constructed that they will grind almost any required size or shape. Here also lenses are cut. Hundreds of hands are required for these operations. The cutting is done with surprising dexterity, operatives becoming very expert in this branch of the work. A large department in this building is devoted to manufacturing special forms of bifocal lenses.

Lenses not applied on special orders go to the storehouse, occupying two-thirds of the second floor, and are put into American Optical Company stock. Almost every kind, color and focus is carried subject to the immediate call of customers. Finished lenses coming via tramway from the grinding plant or sent up from



Axis Marking



Lens Cutting Room

the first floor go to the second floor, where they undergo the many operations necessary to produce marketable goods. Hundreds of employees are kept constantly at work examining and classifying the various qualities, selecting for thickness, centering and axis marking.

Interchangeable and rimless edge lenses are all tagged with their focus numbers by wonderful little automatic tagging machines.

Every lens is focused independently, so that the possibility of error in tagging them is obviated. Trial set lenses must be separately focused and neutralized, and perfectly centered before they are set into the rims.

Here orders for set goods, that is, frames or mountings set with lenses, are handled, hundreds of dozens passing through daily. All drilling is also done in this department.

Rigid supervision is necessary to prevent carelessness, which might result in scratching the surfaces of lenses. No two lenses are allowed to touch one another, and no employee is permitted to have more than one lens in his or her hand at one time.

One entire department is devoted to wrapping or enclosing in envelopes, as the case may be, packing, labeling, shipping, etc.

An interesting feature of this big building is its Receiving Department, or, more properly, its Clearing House, situated at one end of the second floor. All goods coming from other buildings or passing from one department to another must go through this room, so that here the progress of every order is known and recorded. Thousands of dozens of lenses are "cleared" daily and so systematic is this work that there is a daily

Lens
Drilling
Room



View of Entire AOCO Plant from Lower End of Lensdale Factories



balance sheet kept, giving accurate statistics of work done in every part of the Lensdale organization.

The building upon the southern boundary of the Lensdale property is largely used as a warehouse for the storage of all materials necessary in lens manufacture. Here may be seen hundreds of tons of optical glass cut to approximate size and gauged to thickness. Tons and tons of emery, corundum, rouge and such materials are kept here; also parts of machinery, grinding discs and supplies, ready for instant use. Part of this building is devoted to the chemical and physical laboratories of our Research Bureau, looking toward improvements in goods and methods.

DESIGNATION OF LENS SELECTIONS

In order that a quality designation might represent a definite standard in lens production the American Optical Company has prescribed certain limits above which all lenses must qualify to be considered as the first selection. These high standards, with actual examples of lenses coming within their respective classes, are carefully recorded and filed. Lenses coming within the first selection are designated by the registered name, **CENTEX**.

The exacting demands of modern optical practice make it imperative that all lenses for high grade prescription work measure up to the requirements guaranteed under the **CENTEX** trade mark and it is vitally important that lens orders should specify **CENTEX**.

CENTEX lenses are produced from colorless crown specially manufactured optical glass of unvarying refractive index, dispersion and hardness, free from defects such as decentration, and from surface defects as scratches, flakes, etc. **CENTEX** lenses represent the first selection of our output and are the most perfect spectacle and eyeglass lenses that it is possible to manufacture upon a commercial scale.

SECONS, as the name implies, are the second selection from our output.



Lens Blanks Before Grinding

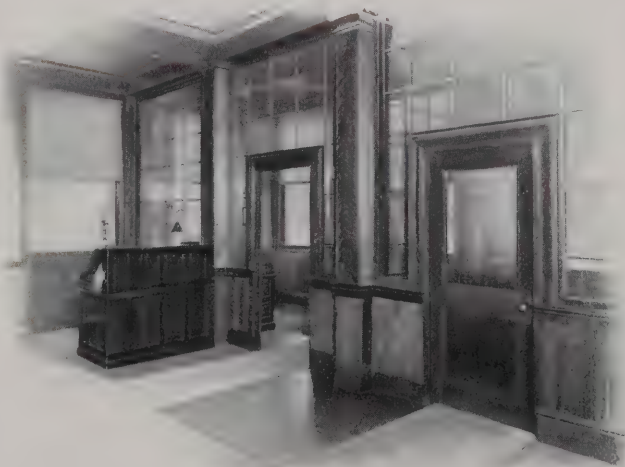


AMERICAN OPTICAL COMPANY GLASS

White Glass American Optical Company white optical glass is a colorless crown specially manufactured stock of uniform density, great mechanical hardness and unvarying index of refraction, remarkable for its whiteness, its clearness, its freedom from "seeds", pits, striae and bubbles. This company consumes the entire output of great European glass works where exist ideal conditions and environment for making a raw product eminently suited to the manufacture of spectacle lenses. This glass is of the highest quality in all its physical properties.

Blue and Smoke Glass Great care and attention is devoted to the selection of these important colors and their classification according to defined standards in shades and thickness. In focused lenses it is necessary to allow a variation of one-half shade either way. Shades are classified from Nos. 0 to 7, light to dark.

Amber Glass Within the past few years there has developed an unusually large demand for amber lenses. They are used particularly for auto goggles, shooting and driving spectacles. In focused lenses, only one shade (light) is regularly supplied. In plano, bent, coquille and mi-coquille forms we furnish both the light and dark amber.



Office Research Bureau

Pink and Amethyst Glass The demand for these colors is so limited that we furnish pink and amethyst lenses only upon special order.

Euphos Glass This glass has come into use within the past few years and is preferred by many over amber glass. It is of a yellow-green shade. We carry a large stock of this material in the rough form as well as some forms of finished lenses, as may be noted on the following pages.

Roentgen Glass As the name suggests, Roentgen glass is used

in spectacles worn by X-Ray operators. It is said to exclude the injurious rays of the Roentgen light, protecting the operator's eyes from X-Ray burn, a particularly dangerous affliction. Furnished in white only.

Pebble The hardness of pebble makes its universal employment for spectacle lenses somewhat impractical, as it necessitates special machinery, slow and expensive processes in every operation of manufacture from sawing the raw stock to edging and drilling the finished lenses.

INSTRUCTIONS FOR ORDERING LENSES

The following instructions, while intended particularly for the attention of our customers, contain many suggestions that may be found of great assistance to the entire trade and we recommend a careful reading:

1. Order Books All orders for lenses should be written on order sheets furnished by us in book form free of charge. Two forms of order blanks are necessary for which separate order books are furnished, marked respectively "*AOCO Lens Orders*" and "*AOCO Sphero Cylinder Lens Orders*". Detailed information for the use of these forms is printed in the front of order books and is very important. Orders for all lenses except Sphero Cylinders, Sphero Cylinder Torics and Other Curve Waters should be entered on the regular form.

2. Description of Goods Avoid the use of questionable abbreviations and ditto marks. Use only descriptions and abbreviations employed in this catalogue in writing lens orders.

3. Dioptral System All focal powers should be written in the dioptral system. All powers of prisms should be written in prism dioptries expressed by the exponent Δ .

4. Foci Our regular stock foci are given on page 202. When necessary to manufacture special foci to order an extra charge is made.

5. Quantity Lenses are always considered as pairs, the quantity being expressed in dozens or fractions of a dozen. Thus orders for three pairs should be written " $\frac{1}{4}$ doz.": an order for a single lens should be written " $\frac{1}{24}$ doz.", etc. Particular emphasis is placed upon this rule as applying to orders written on Sphero Cylinder order sheets.

6. Thickness Order should so state when rimless (R) thickness is desired, otherwise standard thickness is supplied. Rough lenses and optical blanks should be ordered to mm. thickness. Thicknesses of uncut lenses are given in tables, page 203. Sphero Cylinder lenses of standard and rimless thickness should be ordered on separate sheets.

7. Drilling Holes are drilled in rimless lenses to an accepted standard measured from the nearest edge of the hole to the edge of the lens. In ordering rimless lenses it is necessary to specify number of holes to the pair: in the absence of such instructions lenses are sent undrilled, "no holes". "Two holes" would be interpreted as one hole in each lens. Holes are always drilled on center unless otherwise specified.

8. Size of Eye All edged lenses should be ordered by number or letter indicating size of eye desired: when special sizes are wanted millimeter dimensions should be given. An extra charge is made for sizes other than regular.

9. Special Segments Orders for special segments other than regular 1.25 curve and Plano should be entered on AOC_o Sphero Cylinder order sheets giving the two curvatures desired, not the focal power, same as in ordering Sphero Cylinders.

10. Reserve and Advance Orders By keeping statistics on previous sales it is possible to foresee future requirements and place orders in advance for subsequent delivery. Under certain conditions (see Introductory Section), we accept Reserve Orders for lenses which are made ready and held subject to the call of customers.

Important In ordering it is essential that orders should be read over carefully to ascertain whether all necessary details are entered against each item. It is desirable, in writing orders, to be brief and explicit, and thus avoid misunderstandings and delays consequent to the sending of order inquiries.

Always specify whether CENTEX or SECONS are desired.



Inspection Department, Lensdale

AOCO LENS STOCK

Few besides those directly concerned in the manufacture of spectacle and eyeglass lenses have any definite conception of the quantity and multiplicity of kinds of lenses that are necessary to meet even the ordinary (to say nothing of the special) requirements of the optical trade. The combination of focal powers, thickness, sizes, forms, colors, edges, special details, etc., run into many hundred thousand kinds and the quantity which must be carried in AOCO stock of each kind multiplies the actual number of lenses into *millions*.

This vast lens stock must be systematically stored and recorded and forms a most important link in the AOCO service to customers, representing a great investment of capital made so that orders for lenses may be filled with no delay.

On the pages which follow we give concise lists of lenses regularly carried in AOCO stock. By no means do we intend to imply that the sizes and foci given are all that can be furnished, as we are prepared to make and are making all lenses for which there is any demand, and when the demand for any goods is sufficient to warrant doing so we at once add those kinds to AOCO stock. For instance, it would be manifestly impractical to carry edged Toric compounds in stock, so these lenses are carried only in the uncut form, see page 215.



Uncut Lens Stock Room, Lensdale

AOCO STOCK FOCI AND TELEGRAPH CODE

The following table gives the foci of lenses and powers of prisms regularly carried in AOCO stock. For example Uncut White Periscopic Convex lenses are quoted as carried in stock 34 x 44 mm., 0.12 to 8.00, see page 213. This means that our stock under this classification includes all the powers in the following table between and including those named:

Spherical			Cylindrical			Toric 6. D. Base Curve		
Focus Dioptries	Code for Convex Curves	Code for Concave Curves	Focus Dioptries	Code for Convex Curves	Code for Concave Curves	Focus Dioptries	Code for Convex Curves	Code for Concave Curves
0.12	Skeel	Search	0.12	Commerce	Cricket	0.12 Cyl.	Thatch	Tub
0.25	Skiff	Seam	0.25	Commode	Crisis	0.25	Theist	Tube
0.37	Skull	Script	0.37	Common	Critic	0.37	Thew	Tuck
0.50	Sketch	Screw	0.50	Compass	Cross	0.50	Thing	Tuft
0.62	Still	Smart	0.62	Complex	Crown	0.62	Thigh	Tug
0.75	Skout	Screen	0.75	Concern	Crumb	0.75	Thirst	Tulip
0.87	Skate	Scrap	0.87	Cone	Crystal	0.87	Thack	Tucan
1.00	Strap	Snipe	1.00	Congress	Culprit	1.00	Thole	Tune
1.12	Size	Scotch	1.12	Cause	Coast	1.12	Thallus	Tugger
1.25	Sky	Scoop	1.25	Concord	Current	1.25	Thong	Tunic
1.37	Strip	Solar	1.37	Cash	Cloud	1.37	Tharms	Tull
1.50	Six	Science	1.50	Consul	Cutter	1.50	Thorn	Turban
1.62	Strop	Solute	1.62	Car	Clock	1.62	Theban	Tumbler
1.75	Stud	Song	1.75	Contra	Custom	1.75	Thistle	Tumid
1.87	Sink	School	2.00	Cool	Cushion	2.00	Thrash	Turf
2.00	Style	Sort	2.25	Concert	Curve	2.25	Thread	Turn
2.25	Sin	Scholar	2.50	Copper	Cube	2.50	Threat	Turret
2.50	Silver	Scent	2.75	Copy	Cubic	2.75	Thresh	Turtle
2.75	Silk	Scar	3.00	Coral	Cuckoo	3.00	Threw	Tusk
3.00	Sign	Scale	3.25	Cord	Cudden	3.25	Thrift	Tutor
3.25	Supply	Spark	3.50	Comet	Cue	3.50	Thrill	Turnip
3.50	Siege	Saw	3.75	Consort	Cuff	3.75	Thrive	Tumor
3.75	Side	Sand	4.00	Corsair	Culture	4.00	Throb	Tunnel
4.00	Sick	Salt	4.25	Cost	Cup	4.25	Throe	Turbot
4.25	Shrew	Saint	4.50	Cork	Cupola	4.50	Throne	Tureen
4.50	Show	Saddle	4.75	Count	Curlew	4.75	Thrum	Turgid
4.75	Shot	Sabre	5.00	Counter	Curtain	5.00	Thrust	Twang
5.00	Shoal	Sack	5.25	Calk	Citizen	5.25	Thumb	Twig
5.25	Ship	Saba	5.50	Corona	Custard	5.50	Thump	Twill
5.50	Shield	Sacred	5.75	Calibre	Circus	5.75	Thwart	Twirl
5.75	Sheet	Sail	6.00	Counsel	Cuban	6.00	Thyme	Twit
6.00	Sway	Spirit	6.50	Courage	Cuirass			
6.50	Sheath	Sage	7.00	Court	Cumber			
7.00	Swell	Spline	7.50	Cow	Culvert			
7.50	Sharp	Saline	8.00	Crab	Cupid			
8.00	Sextant	Sallet	8.50	Calcine	Church			
8.50	Settle	Salve	9.00	Cradle	Cursor			
9.00	Session	Saltant	9.50	Cake	Christ			
9.50	Service	Sandal	10.00	Craft	Cystic			
10.00	String	Spoon	10.50	Cairo	Chord			
10.50	Sebate	Sample	11.00	Crane	Cyprus			
11.00	Swipe	Spray	12.00	Cravat	Cynic			
11.50	Sedan	Salute	13.00	Crayon	Cymbal			
12.00	Swivel	Spring	14.00	Creation	Cyma			
12.50	Secess	Sally	15.00	Credit	Cycle			
13.00	Section	Sagene	16.00	Creed	Cypress			
13.50	Secant	Sabian	17.00	Crescent	Czar			
14.00	Secret	Sabot						
14.50	Secol	Save						
15.00	Secle	Sacrist						
15.50	Second	Savage						
16.00	Season	Saturn						

Prism

△	Code	△	Code
0.50	Pace	9.00	Pepper
0.75	Parish	10.00	Period
1.00	Paddle	11.00	Person
1.50	Pagan	12.00	Petal
2.00	Pail	13.00	Piece
2.50	Paint	14.00	Pilgrim
3.00	Palace	15.00	Pillow
3.50	Palette	16.00	Pine
4.00	Panic	17.00	Plank
5.00	Parrot	18.00	Play
6.00	Peace	19.00	Plate
7.00	Pedal	20.00	Plume
8.00	Pension		

The following foci are furnished without extra charge but only in White Spherical Centex: 0.68, 1.87, 2.12, 2.37, 2.87, 6.25, 6.75. Code for Spherical (double), Cylinder and Prism, is for White lenses finished on both sides, of standard thickness.

Add the words Rough, Plano, Periscopic, Meniscus, Amber, Blue, Smoke or Rimless when lenses of this description are wanted. Use Spherical and Cylinder code words together for Sphero Cylinder combinations.

Code for Toric is for one surface, the other surface to be designated Rough, Plano or Spherical as desired. If Spherical, use word for foci wanted.

Cylinders are supplied from stock in foci from 0.12 to 8.00, inclusive, only.

CENTER THICKNESS OF UNCUT LENSES

Focus Dioptries	Double Convex { 34 x 44 mm. Peris. Convex { 42 mm. Round		47 mm. Round		Double Concave { 34 x 44 mm. Peris. Concave { 42 mm. Round 47 mm. Round		Plano Cylinder all foci	
	Plano + Cylinder		Meniscus — 6. D. Curve Convex		Meniscus + 6. D. Curve Concave			
	Sphero Cylinder when + Curve predominates		Peris. Convex		Sphero Cylinder when — Curve predominates			
	Standard mm.	Rimless mm.	Standard mm.	Rimless mm.	Standard mm.	Rimless mm.	Standard mm.	Rimless mm.
.12	1.3	1.7	1.3	1.7	1.4	1.8	1.4	1.8
.25	1.3	1.7	1.3	1.7	1.4	1.8		
.37	1.3	1.7	1.4	1.8	1.4	1.8		
.50	1.4	1.8	1.4	1.8	1.4	1.8	Strong Convex and Periscopic Convex 42 mm. Round	
.62	1.4	1.8	1.5	1.9	1.4	1.8		
.75	1.4	1.8	1.5	1.9	1.3	1.7		
.87	1.5	1.9	1.5	1.9	1.3	1.7		
1.	1.5	1.9	1.6	2.	1.3	1.7	8.50	4.1
1.12	1.5	1.9	1.6	2.	1.2	1.6		4.4
1.25	1.6	2.	1.7	2.1	1.2	1.6	9.50	4.6
1.37	1.6	2.	1.7	2.1	1.2	1.6	10.	4.7
1.50	1.6	2.	1.8	2.2	1.1	1.5	10.5	4.9
1.62	1.7	2.1	1.8	2.2	1.1	1.5	11.	5.1
1.75	1.8	2.2	1.9	2.3	1.	1.4	11.5	5.2
2.	1.9	2.3	2.	2.4	1.	1.4	12.	5.3
2.25	2.	2.4	2.1	2.5	1.	1.4	12.50	5.4
2.50	2.	2.4	2.2	2.6	.9	1.3	13.	5.6
2.62	2.1	2.5	2.2	2.6	.9	1.3	13.5	5.8
2.75	2.1	2.5	2.3	2.7	.9	1.3	14.	6.
3.	2.2	2.6	2.4	2.8	.8	1.2	15.	6.5
3.25	2.3	2.7	2.5	2.9	.8	1.2	16.	6.9
3.50	2.4	2.8	2.6	3.	.8	1.2	17.	7.4
3.75	2.5	2.9	2.7	3.1	.8	1.2	18.	7.8
4.	2.6	3.	2.8	3.2	.8	1.2	19.	8.3
4.25	2.7	3.1	2.9	3.3	.8	1.2	20.	8.8
4.50	2.8	3.2	3.	3.4	.8	1.2		
4.75	2.9	3.3	3.1	3.5	.8	1.2		
5.	3.	3.4	3.2	3.6	.7	1.1	Prisms Edge Thickness, mm.	
5.25	3.	3.4	3.3	3.7	.7	1.1		
5.50	3.1	3.5	3.4	3.8	.6	1.	Standard Rimless	
5.75	3.2	3.6	3.5	3.9	.6	1.		
6.	3.3	3.7	3.6	4.	.6	1.	Plano to .87	1.2 1.6
6.50	3.5	3.9	3.8	4.2	.6	1.	1.75 to 1.87	1.4
7.	3.7	4.1	4.	4.4	.6	1.	1.92 to 2.02	.8 1.2
7.50	3.9	4.3	4.2	4.6	.6	1.	2.75 to 4.75	.6 1.
8.	4.	4.4	4.4	4.8	.6	1.	5. to 20.	.4 .8

- Lenses are supplied in Standard and Rimless thickness. (Allowance .2 mm. each way.) The measurement given above is calculated for the center of the lens, except prisms, which are measured at apex.
- Lenses can be produced of a thickness varying from either of the above, but on special order and at a special price only.
- To determine the thickness in the center of Sphero Cylinder lenses:

+ ⊙ +, add the curve of sphere and cylinder together and use convex cylinder table.

— ⊙ —, use spherical curve only using concave spherical table.

+ ⊙ —, use spherical curve only using convex cylinder table.

— ⊙ +, if spherical curve is greater, subtract cylinder from sphere and use the concave spherical table.

— ⊙ —, if cylinder curve is greater, subtract sphere from cylinder and use the convex cylinder table.

SIZES OF UNCUT LENSES

Sizes	Oval	Round	Square	Coquille and Mi-coquille	Auto
Regular	34 x 44 mm.	42 mm.	42 mm.	33 x 44 mm.	
Large		47 mm.	47 mm.	40 x 50 mm.	42 x 51 mm.
Extra Large				50 x 60 mm.	54 x 63 mm.
Ultra Large				60 x 70 mm.	61 x 70 mm.

STANDARD SIZES OF EDGED LENSES

Eye Size	Bevel Edge	Rimless Edge	Eye Size	Bevel Edge
2	26. x 35. mm.	27. x 36. mm.	A	24.7 x 38.5 mm.
1	27.5 x 36.5 mm.	28. x 37. mm.	B	22.5 x 39.5 mm.
0	28.8 x 37.8 mm.	29.5 x 38.5 mm.	C	21. x 39. mm.
00	30.7 x 39.7 mm.	31. x 40. mm.	D	20.7 x 35. mm.
000	32. x 41. mm.	32. x 41. mm.	F2	16.5 x 37. mm.
0000	35.5 x 44.5 mm.	35.5 x 44.5 mm.	F1	14.5 x 39.4 mm.
Jumbo	37.4 x 45.4 mm.	37.4 x 45.4 mm.	F0	15.1 x 37.7 mm.
			F00	10. x 34.5 mm.

SPECIAL SIZES OF EDGED LENSES

Eye Size	Bevel Edge	Rimless Edge	Eye Size	Description
oF		31.5 x 38.5 mm.	oF	o Eye Full
ooF		33. x 40. mm.	ooF	oo Eye Full
X	38. mm. Round		X	Round
XX	36.3 mm. Round		XX	Standard Test Size
XXX	32. mm. Round		XXX	Small Test Size

STANDARD SIZES OF EDGED SEGMENTS

Eye Size	Cement Bifocal	Perfection Bifocal	Opifex Bifocal
1			
0	13 x 25 mm.	13 x 25 mm.	18 mm. round
00			

IMPORTANT INFORMATION

1. Focused blue and smoke lenses are supplied only in AOCo standard shades with allowance of one-half shade either way.
2. Focused amber lenses are supplied in only one shade, light. Coquille, Mi-coquille and Plano Amber lenses are supplied in two shades, light and dark. Light Amber transmits same percentage of light as No. 1 shade smoke; Dark Amber transmits same percentage of light as No. 4 shade smoke.
3. Pink and Amethyst glass carried in stock in the rough. Lenses in these colors ground to special order. *Additional charges apply when orders call for one or more of the following specifications:*
4. Lenses ordered to be gauged to exact mm. thickness which can be selected from stock.
5. Plano colored lenses ordered to match exact shade of sample. (Regular orders to match shade of sample are supplied with nearest standard shade without extra charge unless exact match is distinctly specified, when additional charge is made, as stated above.)
6. Coquille and Mi-coquille blue and smoke lenses ordered in shade No. 7.
7. Lenses ordered with polished edges.
8. Edged Spherical lenses ordered with center indicated.
9. Cement Wafers, Perfection Bifocal Uppers, Perfection Bifocal Loweres when ordered edged to center.
10. Lenses ordered to special size and shape other than listed.

The Lens Dioptry All AOC_o Lenses are numbered in the generally-known and accepted Dioptral system. The unit of this system is a lens whose focal length for parallel rays is one meter. This unit is called one dioptry, usually expressed by the capital letter "D", thus: 1 D. A lens of twice this strength is said to have a focal power of two dioptries and a focal length of one-half meter; a 4 D lens has a focal length of one-quarter meter; a 0.50 D lens has a focal length of two meters, etc.

POWER AND FOCAL LENGTH OF LENSES OF THE DIOPTRAL SYSTEM

Dioptral Power	Focal Length	Dioptral Power	Focal Length	Dioptral Power	Focal Length	Dioptral Power	Focal Length
Dioptries	Meters	Dioptries	Meters	Dioptries	Meters	Dioptries	Meters
0.12	8.0000	1.37	.7273	4.00	.2500	8.50	.1176
0.25	4.0000	1.50	.6667	4.25	.2353	9.00	.1111
0.37	2.6667	1.62	.6154	4.50	.2222	9.50	.1053
0.50	2.0000	1.75	.5714	4.75	.2105	10.00	.1000
0.56	1.7778	2.00	.5000	5.00	.2000	10.50	.0952
0.62	1.6000	2.25	.4444	5.25	.1905	11.00	.0909
0.75	1.3333	2.50	.4000	5.50	.1818	12.00	.0833
0.81	1.2308	2.62	.3809	5.75	.1739	13.00	.0769
0.87	1.1429	2.75	.3636	6.00	.1667	14.00	.0714
1.00	1.0000	3.00	.3333	6.50	.1538	15.00	.0667
1.12	.8889	3.25	.3077	7.00	.1429	16.00	.0625
1.25	.8000	3.50	.2857	7.50	.1333	18.00	.0556
1.31	.7619	3.75	.2667	8.00	.1250	20.00	.0500

The Prism Dioptry As prisms notably possess the property of apparently changing the position of objects seen through them we employ a system of measuring their relative strengths, originally proposed by Mr. Charles F. Prentice, M. E., and first adopted by us, in which the tangent distance between the object and its virtual image forms the basis of comparison. The tangent-deflection of one centimeter *theoretically* measured in a plane one meter from the prism is the unit of prismatic power and is called one prism dioptry, expressed by the exponent Δ ; thus, 1 Δ .



AOC_o Prentice Prismometric Chart

In measuring the refraction of prisms, however, the same as for lenses, it is necessary that the incident pencils of light should be composed of parallel rays, so that the *theoretic* distance of one meter must in practice be increased to at least six meters.

Therefore, the Prismometric Scale published by us, which is to be placed exactly six meters from the prism while sighting through the latter, represents the prism dioptry as a six-centimeter distance. Scales which are computed for a shorter distance than six meters have been placed upon the market, but are wholly unreliable.

The Dioptral system of numbering prisms alone possesses the great desideratum of establishing a direct and simple relation between the prism dioptry and the lens dioptry, as demonstrated by Mr. Prentice's law, that "a lens decentered 1 cm. will produce as many prism dioptries as the lens has dioptries of refraction." Thus a lens of 1 D decentered 1 cm. will afford 1 Δ ; a lens of 2 D decentered 1 cm. will produce 2 Δ , etc. The prism-dioptral power is also in direct proportion to the amount of decentration, so that a lens of 2 D decentered $\frac{1}{2}$ cm. gives 1 Δ ; whereas, if the same lens is decentered 2 cm. it produces 4 Δ , and so on. It is, therefore, only the size of the lens which in practice will set a limit to its prismatic power.

REGULAR FORMS OF AOCO LENSES

WE give below a brief description of the regular forms of AOCO glass, chunks, blanks, rough lenses and finished lenses. In ordering, it is necessary to state form of glass, blank or lens wanted as well as other details such as foci, size, thickness, color, etc. The strength of spherical lenses and plano combinations such as plano cylinder, plano prism, etc., are designated by their focal powers, not their surface curves. All compound forms, those having surfaces of different character such as spherocylinder, etc., must be ordered by giving both surface curves.

OPTICAL GLASS SHEETS

Flat glass stock of varying thickness. Surfaces not ground.

CHUNKS

Irregular shaped masses of glass for display purposes.

GLASS BLANKS

Flat Glass discs, specially selected for quality, cut in convenient sizes for surface grinding.

Meniscus Glass discs, selected for quality and moulded to curve approximately the base curve of Meniscus lenses, for surface grinding.

ROUGH FORMS

Plano Rough One side plano, the other side unfinished.

Sphero Rough One side spherical, the other side unfinished.

Meniscus Rough One side spherical + or — 6., the other side unfinished.

Cylinder Rough One side cylindrical, the other side unfinished.

Toric Rough One side toric + or — 6. or 9. base, the other side unfinished.

Prism Rough One side plano, the other side formed angular with reference to the plano side but unfinished.

PLANO FORMS

Plano Both sides ground flat and parallel.

Meniscus Plano One side — 1.25 — 6. or — 9., the other side + 1.25 + 6. or + 9. respectively.

Mi-coquille Mechanically curved from a plano form; one side approximately — 2.50, the other side approximately + 2.50.

Coquille Mechanically curved from a plano form; one side approximately — 7.50, the other side approximately + 7.50.

AUTO FORMS (NON-OPTICAL GLASS)

Cut to special shape required for various types of Auto Goggles and supplied flat or bent in cylindrical form. No focus. (See page 228.)

SPHERICAL FORMS

Double Convex Both sides of equal convex spherical curve.

Double Concave Both sides of equal concave spherical curve.

Plano Convex One side plano, the other side convex spherical.

Plano Concave One side plano, the other side concave spherical.

Periscopic Convex One side — 1.25 spherical, the other side convex spherical in excess of + 1.25.

Periscopic Concave One side + 1.25 spherical, the other side concave spherical in excess of — 1.25.

Meniscus Convex One side — 6. spherical, the other side convex spherical in excess of + 6.

Meniscus Concave One side + 6. spherical, the other side concave spherical in excess of — 6.

Lenticular Convex Strong convex spherical portion in center of lens on one or both sides surrounded by plano surface, or by spherical surface to special order.

Lenticular Concave Strong concave portion in center of lens on one or both sides surrounded by plano surface. Lenticular forms used in cataract cases with convex and in strong myopia, with concave to lighten their weight. Supplied only on special order. If oval center is desired, order should so specify.

CYLINDER FORMS

Plano Cylinder One side plano, the other side cylindrical convex or concave.

Sphero Cylinder One side spherical, the other side cylindrical convex or concave.

Cross Cylinder One side convex cylinder, the other side concave cylinder. Axis of cylinders crossed, usually at right angles.

Toric Plano Cylinder One side convex or concave spherical 6. or 9. The other side convex or concave toric. (See description Toric Lenses, page 210.) Curve of sphere and base curve of toric surfaces the same.

Toric Sphero Cylinder One side convex or concave spherical, the other side convex or concave toric. Base of toric curve 6. or 9. Spherical curve other than base curve. (See description Toric Lenses, page 210.)

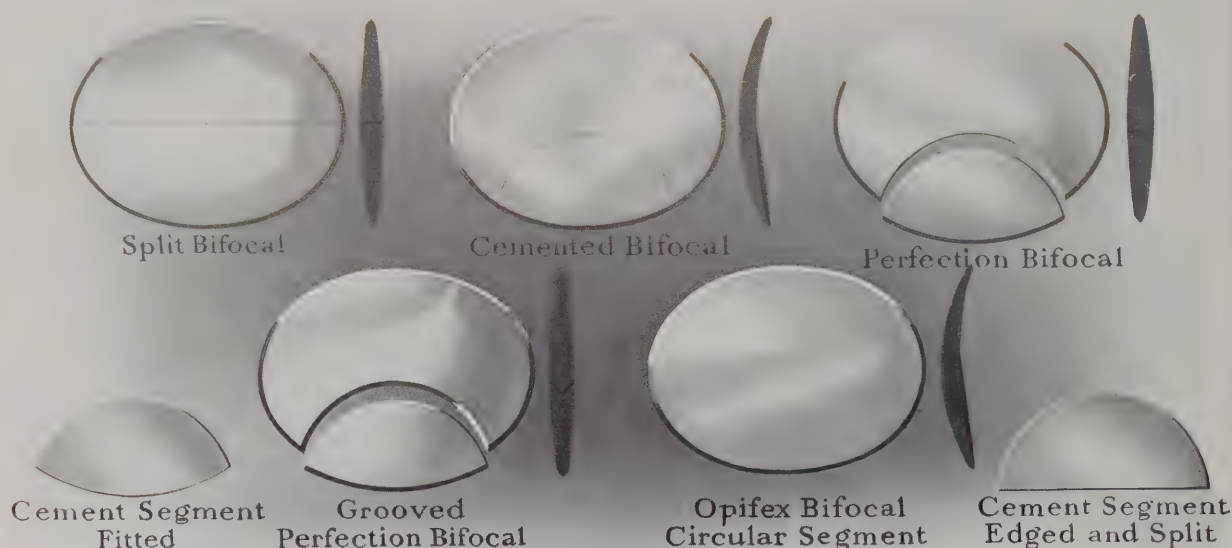
PRISM FORMS

Plano Prism Both sides plano, forming an angle with reference to one another.

Sphero Prism One side spherical, the other side plano, forming an angle with reference to one another.

Cylinder Prism One side cylindrical, the other side plano, forming an angle with reference to one another.

For Bifocal forms, see pages 208 and 209.



BIFOCAL FORMS OF AOCO LENSES

The Bifocal Lens, as its name indicates, has two foci, the upper for distance vision and the lower for reading or near work. The invention of Bifocal Lenses is accredited to Benjamin Franklin and, in fact, they were at one time termed "Franklin Glasses". Originally, double focus glasses were made in the form now commonly known as split bifocals, the two parts being equally divided or "split" through the center of the lenses.

Perfection Bifocals, Double Convex The Perfection Bifocal is a modified form of the "split" bifocal, in that it consists of two lenses fitted accurately together as shown in the accompanying illustrations. The lower lens is in the form of a segment of a circle, 13 x 25 mm. These parts are strictly interchangeable, but must be ordered to size of eye desired, so that the outside curvature of the completed lens may be regular.

The Perfection Bifocal is furnished in two forms, viz.: Grooved and Regular. The Grooved Perfection Bifocal has a bevel groove in its lower edge into which the bevel edge of the segment is fitted. In the regular form of Perfection Bifocal these edges are flat as with rimless edge lenses. It is only practical to use Perfection Bifocals in frames, consequently they are supplied only with bevel outside edge, sizes 1, 0, and 00 eye.

Cement Wafers (Periscopic.) These are thin reading lenses which may be cemented to the concave side of periscopic lenses to add near vision focal power (Convex) from +0.12 to +8. D. The reading or near vision lenses are furnished as either round uncut wafers or edged segments. Uncut wafers are 19, 30 or 38 mm. in diameter, edged segments are furnished for 1, 0 or 00 eye, 13 x 25 mm.

Cement Wafers (Plano and Other Curves.) When the distance vision lens is other than periscopic or plano, other curve wafers must be ordered to match the curves of the surface to which the segments are to be attached. Plano wafers are furnished uncut round 30 and 38 mm. diameter; other curve wafers, uncut round, 30 mm. diameter only. Edged segments supplied same size for 1, 0 and 00 eye, 13 x 25 mm. Cement wafers, all kinds, may be furnished edged and split, that is, the circular upper edge is finished and the wafer split ready for cementing, after which the optician may finish the lower edge flush with the edge of the distance lens. Complete Cement Bifocals in periscopic form can be supplied from stock and in plano and other curves to order.

When so ordered we can furnish special sizes and shapes in all forms of edged segments.

Opifex Wafers (Patented.) The Opifex is a very satisfactory form of cemented bifocal. It comprises an extremely thin circular wafer supplied uncut 19 mm. or edged to 18 mm. diameter, which may be cemented to the concave side of a plano, periscopic or other curve distance lens. Opifex wafers are so thin that they would be extremely difficult to handle in the ordinary way, so they are always cemented on "bodies" or small lenses of the same opposite dioptric curvature, from which they are slid off on to the distance lenses to which they are to be attached, first being heated to melt the cement. When supplied uncut they are 19 mm. in diameter and also on bodies. The operation of edging is done while they are still attached to the body glasses, which produces a perfect knife edge. When cemented to the distance lens the Opifex wafer is practically invisible.

Kryptok Bifocals (Patented.) This lens is made by grinding a depression, or, as it is called, a countersink, in a disk of crown glass, into which a small flint disk of same opposite dioptric curvature is placed, the two parts being united by fusion forming an integral disk. When surfaced as any ordinary lens the Kryptok blank becomes a fused bifocal.

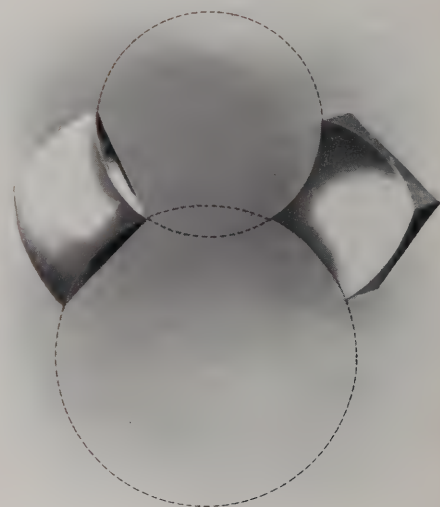
Full directions for selecting blanks and figuring focal combinations will be furnished upon request.

Split Bifocals The Split Bifocal consists of the combination of two half lenses of different dioptral power. Their straight edges are flat. No cement is employed and needless to say this type of lens can only be used in frames.

AOCO CENTEX TORIC LENSES

The word "toric" is derived from the Latin "torus" or "tore", meaning the surface described by the circumference of a circle revolving about a straight line in its own plane. As applied to optics, it is a lens whose diametrically opposed principal meridians are of unequal refraction. By applying this principle to the grinding of a lens we are enabled to produce two curvatures of unequal radii on the same surface, leaving the reverse side for another curve, giving the opportunity for grinding a sphero cylinder combination in periscopic form, which if desired may be made with a pronounced curvature which is the form commonly demanded. As supplied by us, Toric Lenses are made with a base curve (the weaker curve) of 6.00 and 9.00 D. We combine with any of the base curves, which represent the spherical power, stronger ones, representing the cylindrical power, ranging from 0.12 to 6.00 D.

Orders for Toric Lenses should be written the same as for sphero cylinders, *always* adding instructions as to the base curve desired; the 6.00 base curve being at the present time most in demand and is supplied unless otherwise ordered.



Rough Torics We furnish Rough Toric Lenses, that is, rough on one side, but with the toric surface ground and polished, thus enabling the optician to grind any spherical curve he may desire on the rough side. With a comparatively small stock of Rough Toric Lenses an almost unlimited number of combinations can thus be made.

While more expensive than others, Toric Lenses possess a number of distinctive features and we anticipate a decided increase in their application as these advantages become more generally understood. They are now in use among many of the best oculists, optometrists and opticians, who claim for them many advantages over their sphero cylinder equivalents. Among them may be mentioned the following:

1. They remove, to a great extent, the reflections which are so annoying to many.
2. They admit of their peripheral area being brought nearer to the eye, thus presenting an enlarged field of vision.
3. In many combinations (all high powers), they make a lighter-looking lens than their sphero cylinder equivalent.
4. The curved surfaces of the lens are more concentric with the eyeball; thus in movements of the eye the visual axis will be less oblique to the inner surface of the lens, and the distance from the eye to all points on the surface of the lens more equal, thus requiring less change in the adjustment of the accommodation when looking through portions of the lens remote from its geometrical center. This makes Toric Lenses particularly desirable for all activities requiring a free and quick movement of the eye.
5. They are particularly commendable where bifocal lenses are required, as the segment for reading, owing to the form of the lens, inclines towards and meets the visual axis more nearly at right angles.

Many of the advantages enumerated above, attributed to the Toric Lens, are equally true of the Meniscus 6.00 and 9.00 curve lens, which is the spherical form developed to fulfill the same useful purpose.

AOCO CENTEX "47" LENSES

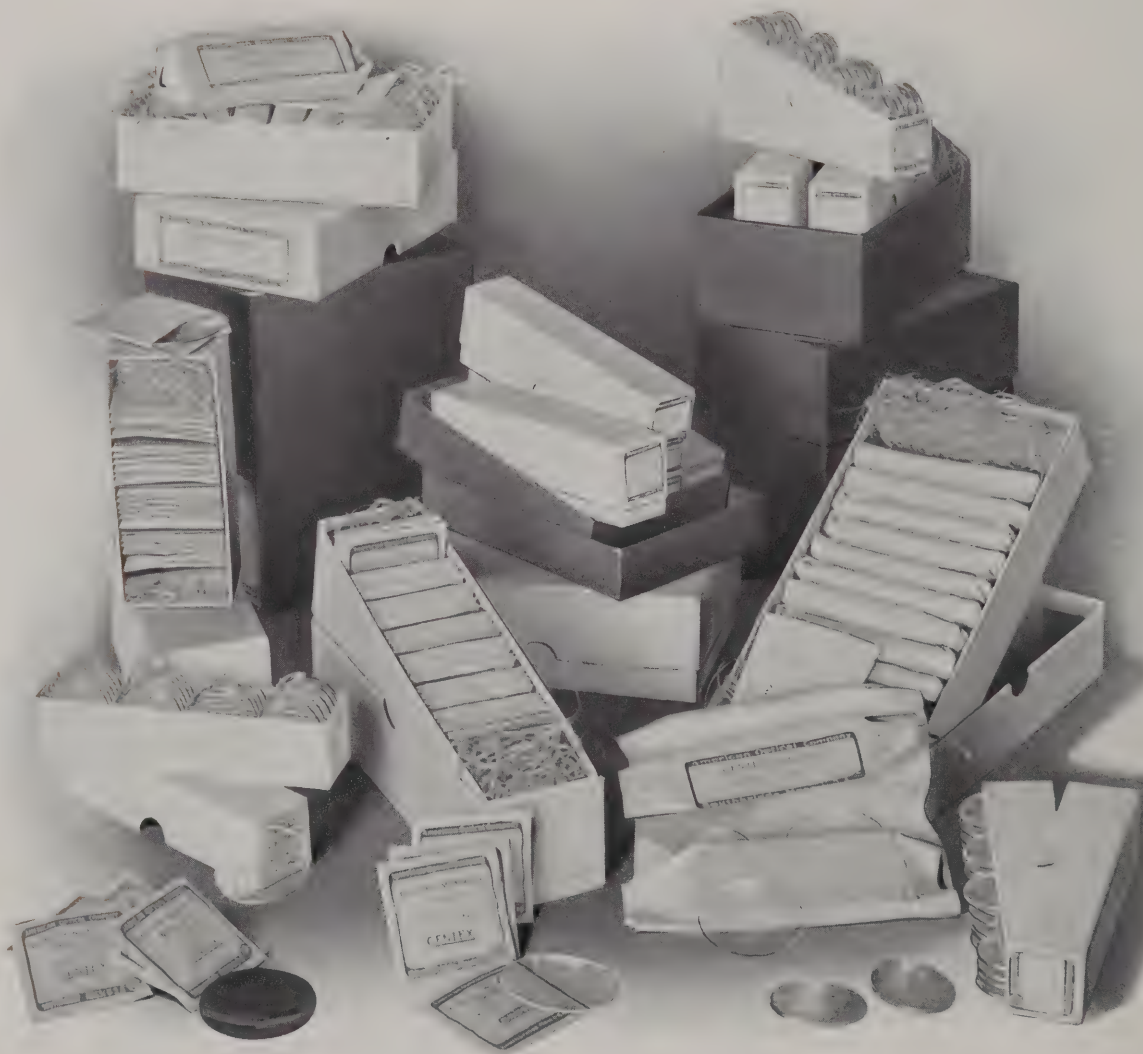
We attach special significance to the fact that all of the more important forms of AOCO Uncut Centex Lenses are now supplied in the large 47 mm. size, either round 47 mm. diameter in the plano, spherical, cylinder and spherocylinder forms, or square with rounded corners 47 mm. in the toric and Kryptok bifocal forms.

The growing demand for lenses of large eye sizes makes it essential that uncut lenses be large enough to furnish every prescription requirement at any desired axis. This is manifestly impossible in many cases with the 42 mm. square or 34 x 44 mm. oval lenses.

Centex "47" Lenses combining as they do the high quality standard guaranteed under the registered name "Centex" with a size that makes them universally adapted to the demands of modern prescription work are the most advanced forms of the uncut lens product that have ever been offered. We are strongly advocating the general adoption of the 47 mm. lens as a stock size. The growing demand for Centex "47" Lenses is indicative of a general appreciation by the trade of the superior excellence of these desirable goods.



Edge Grinding Room, Lensdale



AOCO CENTEX LENSES
SPHERICAL

For description, see opposite page

AOCO CENTEX LENSES

UNCUT SPHERICAL

SHAPE	SIZE	THICKNESS	STOCK FOCI
Meniscus Convex and Meniscus Concave, 6. Curve (White, Amber)			
Round	47	Standard and Rimless	0.12 to 8.
Periscopic Convex and Periscopic Concave, 1.25 Curve (White, Amber, Blue, Smoke)			
Oval	34 x 44	Standard and Rimless	0.12 to 8.
Periscopic Convex and Periscopic Concave, 1.25 Curve (White)			
Round	42 and 47	Standard and Rimless	0.12 to 8.
Round	42	Standard (strong curves)	8.50 to 20.
Oval (Pebble, axis cut)	34 x 44	Standard	0.12 to 8.
Double Convex and Double Concave (White)			
Oval	34 x 44	Standard and Rimless	0.12 to 8.
Round	42 and 47	Standard and Rimless	0.12 to 8.
Round	42	Standard (strong curves)	8.50 to 20.
Plano Convex and Plano Concave (White)			
Round	42 and 47	Standard and Rimless	0.12 to 8.
Round	42	Standard (strong curves)	8.50 to 20.

EDGED SPHERICAL

EDGE	STOCK EYE SIZES	STOCK FOCI
Meniscus Convex and Meniscus Concave, 6. Curve (White)		
Bevel	1, 0, 00 and 000	0.12 to 8.
Rimless	0, 00, 000, 0 F and 00 F	0.12 to 8.
Periscopic Convex and Periscopic Concave, 1.25 Curve (White)		
Bevel	1, 0, 00 and 000	0.12 to 8.
Rimless	0, 00, 000, 0 F and 00 F	0.12 to 8.
Bevel (Pebble, axis cut)	1, 0, 00 and 000	0.12 to 8.
Rimless (Pebble, axis cut)	0, 00, 000, 0 F and 00 F	0.12 to 8.
Double Convex and Double Concave (White)		
Bevel	1, 0, 00 and 000	0.12 to 8.
Rimless	0, 00, 000, 0 F and 00 F	0.12 to 8.
Plano Convex and Plano Concave (White)		
Bevel	1, 0, 00 and 000	0.12 to 8.
Rimless	0, 00, 000, 0 F and 00 F	0.12 to 8.

All above sizes and foci regularly carried in AOCO stock. Other sizes and foci will be manufactured to order.

Rimless Edge Lenses can be supplied from AOCO stock, drilled 2, 3 and 4 holes to pair, on center. Lenses drilled off center supplied on special order.

Plano Lenses in Flat and Meniscus Form will be found on page 219.

Polished Edge Lenses supplied from stock in 0 and 00 eye in Periscopic Convex and Double Convex.

Uncut Meniscus Amber Lenses to 4.25 only.

For "Secons", see page 225.



AOCO CENTEX LENSES
TORIC AND CYLINDER

For description, see opposite page

AOCO CENTEX LENSES

UNCUT TORIC AND CYLINDER

SHAPE	SIZE	THICKNESS	STOCK FOCI
Toric Plano Cylinder Convex and Toric Plano Cylinder Concave, + 6. Curve (White)			
Square, round corners - - -	47 - - - - -	Standard and Rimless -	0.12 to 6.
Toric Sphero Cylinder + \odot +, - \odot -, + 6. Curve (White)			
Square, round corners - - -	47 - - - - -	Standard and Rimless -	<div style="display: flex; align-items: center;"> } <div> 0.12 to 6. Sph. 0.12 to 4.25 Cyl. </div> </div>
Plano Cylinder Convex and Plano Cylinder Concave (White, Amber Blue, Smoke)			
Square, round corners - - -	42 (axis diagonal) - -	Standard and Rimless - -	0.12 to 8.
Round - - - - -	47 - - - - -	Standard and Rimless - -	0.12 to 8.
Sphero Cylinder + \odot +, - \odot -, + \odot -, - \odot + (White)			
Square, round corners - - -	42 (axis diagonal) - -	Standard and Rimless - -	0.12 to 8.
Round - - - - -	47 - - - - -	Standard and Rimless - -	0.12 to 8.
Cross Cylinder + \odot - (White)			
Square, round corners -	42 (axis diagonal) - -	Standard and Rimless - -	0.12 to 8.

EDGED CYLINDER

EDGE	STOCK EYE SIZES	STOCK FOCI
Plano Cylinder Convex and Plano Cylinder Concave, Axis 90° and 180° (White)		
Bevel -	1, 0, 00, 000 - - - - -	0.12 to 8.
Rimless -	0, 00, 000, 0 F, 00 F - - - - -	0.12 to 8.
Sphero Cylinder + \odot +, - \odot -, + \odot -, - \odot +, Axis 90° and 180° (White)		
Bevel -	1, 0, 00, 000 - - - - -	0.12 to 8.
Rimless -	0, 00, 000, 0 F, 00 F - - - - -	0.12 to 8.

Above Lenses supplied in Centex only.

All above sizes and foci carried in AOCO stock. Other sizes and foci will be manufactured to order.

Drilled and Polished Edge Lenses supplied to special order.



AOCO CENTEX LENSES
ROUGH

For description, see opposite page

AOCO CENTEX LENSES

UNCUT ROUGH

One Side Ground and Polished — White, Amber, Blue, Smoke, Amethyst and Euphos

SHAPE	SIZE	THICKNESS—WHITE	THICKNESS—COLORED
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Meniscus Rough + or — 6. Curve

Round	- - - - -	47	- - - - -	2 to 7	- - - - -	2 to 5
Round	- - - - -	51	- - - - -	2 to 5	- - - - -	2 to 5
Round	- - - - -	63	- - - - -	2 to 5	- - - - -	

Sphero Rough + or — 0.12 to 8.

Oval	- - - - -	34 x 44	- - - - -	2 to 7	- - - - -	
Oval	- - - - -	42 x 51	- - - - -	2 to 7	- - - - -	
Round	- - - - -	42	- - - - -	2 to 7	- - - - -	
Round	- - - - -	47	- - - - -	2 to 7	- - - - -	
Round	- - - - -	51	- - - - -	2 to 7	- - - - -	
Square	- - - - -	42	- - - - -	2 to 7	- - - - -	
Square	- - - - -	51	- - - - -	2 to 7	- - - - -	

Plano Rough

Square, round corners	- - - - -	42	- - - - -	2 to 10	- - - - -	2 to 7
Square	- - - - -	47	- - - - -	2 to 7	- - - - -	
Square	- - - - -	51	- - - - -	2 to 7	- - - - -	
Square	- - - - -	63	- - - - -	2 to 7	- - - - -	
Square	- - - - -	71	- - - - -	2 to 7	- - - - -	
Square	- - - - -	80	- - - - -	2 to 7	- - - - -	

Toric Rough + or — 6. Curve, 0.12 to 6.

Square, round corners	- - - - -	47	- - - - -	2 to 7	- - - - -	2 to 7
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Cylinder Rough + or — 0.12 to 8.

Square, round corners	- - - - -	42 (axis diagonal)	- - - - -	2 to 8	- - - - -	2 to 4
Round	- - - - -	47	- - - - -	2 to 4	- - - - -	2 to 4

Prism Rough 0.50 Δ to 10. Δ

Square	- - - - -	42	- - - - -	2 to 4*	- - - - -	2 to 4*
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*Thickness measured at Apex.

See Machinery Section for Grinding Machinery, Tools and Supplies.

Rough White Lenses supplied index 1.507 or 1.523 as ordered.



AOCO CENTEX LENSES
PLANO

For description, see opposite page

AOCO CENTEX LENSES

UNCUT PLANO

SHAPE	SIZE										THICKNESS		
Meniscus Plano, 1.25 Curve (White, Amber, Blue, Smoke)													
Oval	-	-	-	-	-	-	-	34 x 44	-	-	-	-	Standard and Rimless
Round	-	-	-	-	-	-	-	42	-	-	-	-	Standard and Rimless
Round	-	-	-	-	-	-	-	47	-	-	-	-	Standard and Rimless
Round	-	-	-	-	-	-	-	51	-	-	-	-	Standard
Round	-	-	-	-	-	-	-	63	-	-	-	-	Standard
Meniscus Plano, 6. Curve (White, Amber, Blue, Smoke)													
Round	-	-	-	-	-	-	-	47	-	-	-	-	Standard and Rimless
Round	-	-	-	-	-	-	-	51	-	-	-	-	Standard
Round	-	-	-	-	-	-	-	63	-	-	-	-	Standard
Round	-	-	-	-	-	-	-	71	-	-	-	-	Standard
Round	-	-	-	-	-	-	-	80	-	-	-	-	Standard
Meniscus Plano, 9. Curve (White, Amber, Blue, Smoke)													
Round	-	-	-	-	-	-	-	47	-	-	-	-	Standard
Flat Plano (White, Amber, Blue, Smoke, Euphos, Amethyst, Pink, Green)													
Oval	-	-	-	-	-	-	-	34 x 44	-	-	-	-	Standard and Rimless
Oval	-	-	-	-	-	-	-	54 x 63 (Auto)	-	-	-	-	Standard
Oval	-	-	-	-	-	-	-	61 x 70 (Auto)	-	-	-	-	Standard
Round	-	-	-	-	-	-	-	42	-	-	-	-	Standard and Rimless
Round	-	-	-	-	-	-	-	47	-	-	-	-	Standard and Rimless
Flat Plano (White Frosted)													
Round	-	-	-	-	-	-	-	42	-	-	-	-	Standard and Rimless

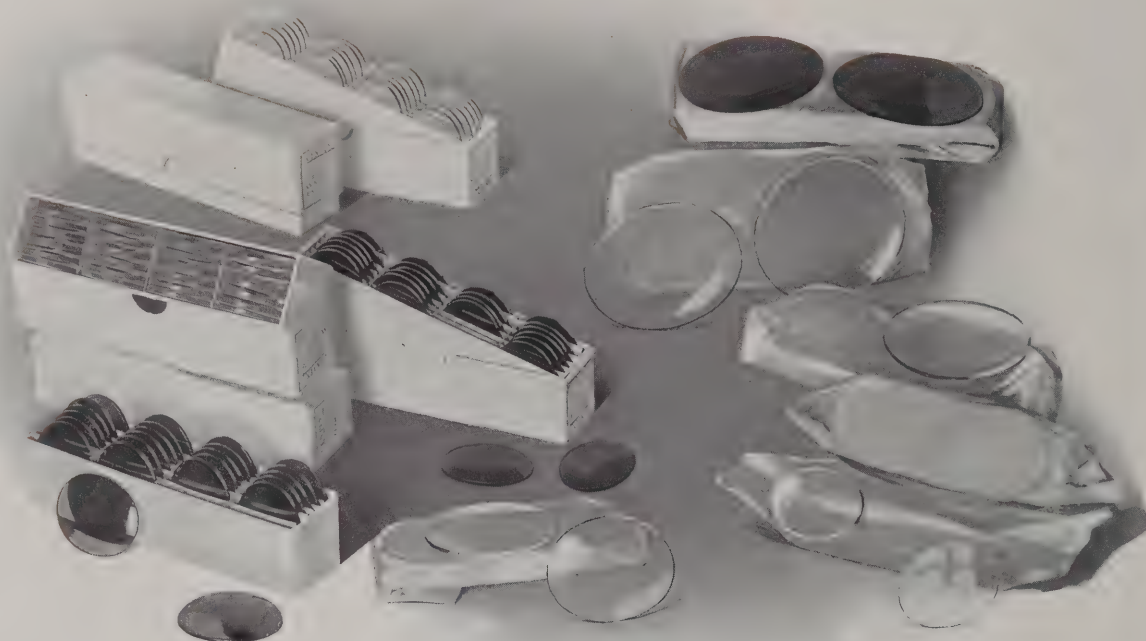
EDGED PLANO

EDGE												STOCK EYE SIZES
Meniscus Plano, 1.25 Curve (White, Amber, Blue, Smoke)												
Bevel	-	-	-	-	-	-	-	-	-	-	-	1, 0, 00, 000
Rimless	-	-	-	-	-	-	-	-	-	-	-	0, 00, 000, 0 F, 00 F
Meniscus Plano, 6. Curve (White, Amber, Blue, Smoke)												
Bevel	-	-	-	-	-	-	-	-	-	-	-	1, 0, 00, 000
Rimless	-	-	-	-	-	-	-	-	-	-	-	0, 00, 000, 0 F, 00 F
Meniscus Plano, 9. Curve (White, Amber, Blue, Smoke)												
Bevel	-	-	-	-	-	-	-	-	-	-	-	1, 0, 00, 000
Rimless	-	-	-	-	-	-	-	-	-	-	-	0, 00, 000, 0 F, 00 F
Flat Plano (White, Amber, Blue, Smoke, Shooting)												
Bevel	-	-	-	-	-	-	-	-	-	-	-	1, 0, 00, 000
Rimless	-	-	-	-	-	-	-	-	-	-	-	0, 00, 000, 0 F, 00 F

Shooting Lenses are Amber Glass frosted except circular space in center for sighting

All above sizes regularly carried in AOCo stock. Other sizes will be manufactured to order.

Rimless Edge Lenses can be supplied from AOCo stock drilled 2, 3 and 4 holes to pair, on center. Lenses drilled above or below center supplied on special order.



AOCO CENTEX LENSES
UNCUT COQUILLE AND MI-COQUILLE
 White, Amber and Smoke

SHAPE	SIZE MM.												THICKNESS		
Coquille (no focus)															
Oval	-	-	-	-	-	-	-	33 x 44	-	-	-	-	-	-	Standard
Oval	-	-	-	-	-	-	-	40 x 50	-	-	-	-	-	-	Standard
Oval	-	-	-	-	-	-	-	50 x 60	-	-	-	-	-	-	Standard
Oval	-	-	-	-	-	-	-	60 x 70	-	-	-	-	-	-	Standard
Mi-coquille (no focus)															
Oval	-	-	-	-	-	-	-	33 x 44	-	-	-	-	-	-	Standard
Oval	-	-	-	-	-	-	-	40 x 50	-	-	-	-	-	-	Standard
Oval	-	-	-	-	-	-	-	50 x 60	-	-	-	-	-	-	Standard
Oval	-	-	-	-	-	-	-	60 x 70	-	-	-	-	-	-	Standard

EDGED COQUILLE AND MI-COQUILLE
 White, Amber and Smoke

EDGE													STOCK EYE SIZES	
	Coquille (no focus)													
Bevel	-	-	-	-	-	-	-	-	-	-	-	-	-	1, 0, 00 and 000
Rimless	-	-	-	-	-	-	-	-	-	-	-	-	-	0, 00 and 000
	Mi-coquille (no focus)													
Bevel	-	-	-	-	-	-	-	-	-	-	-	-	-	1, 0, 00 and 000
Rimless	-	-	-	-	-	-	-	-	-	-	-	-	-	0, 00 and 000

Coquille Lenses have curve approximately 7.50 D.
 Mi-coquille Lenses have curve approximately 2.50 D.



AOCO CENTEX LENSES

UNCUT PRISM

White

SHAPE	SIZE	THICKNESS	POWERS
Plano Prism			
Square	- - - 42 - - -	Standard and Rimless	- - - 0.50 Δ to 10. Δ
Square	- - - 42 - - -	Standard	- - - 11. Δ to 20. Δ
Sphero Prism, Convex Spherical Curve combined with Prismatic Power			
Square	- - - 42 - - -	Standard and Rimless	- - - 0.12 to 4.25 Sph. 0.50 Δ to 3.50 Δ
Cylinder Prism, Convex Cylinder Curve combined with Prismatic Power			
Square	- - - 42 - - -	Standard and Rimless	- - - 0.12 to 4.25 Cyl. 0.50 Δ to 3.50 Δ

EDGED PRISM

White

SHAPE	EDGE	STOCK EYE SIZES	POWERS
Plano Prism			
Round	- - - Bevel - -	X (38 mm.) and XX (36.3 mm.)	- - - 0.50 Δ to 20. Δ
Square	- - - Rimless - -	38 mm.	- - - 0.50 Δ to 20. Δ
Oval	- - - Bevel - -	1, 0, and 00	- - - 0.50 Δ to 20. Δ

For description of Prism Dioptry, see page 205.

Above Lenses supplied in Centex only.

For Prism Sets and Prism Bar, see Trial Set Section of this catalogue.

AOCO CENTEX LENSES

UNCUT BIFOCAL

White

STYLE	SHAPE	SIZE	STOCK FOCI
Cement Wafers			
Plano Convex - - - - -	Round - - - - -	30 - - - - -	0.12 to 8.
Plano Convex - - - - -	Round - - - - -	38 - - - - -	0.12 to 8.
Periscopic Convex (+1.25 Curve) - - - - -	Round - - - - -	30 - - - - -	0.12 to 8.
Periscopic Convex (+1.25 Curve) - - - - -	Round - - - - -	38 - - - - -	0.12 to 8.
Other Curves, Convex - - - - -	Round - - - - -	30 - - - - -	0.12 to 8.
Opifex Wafers, Knife Edge on Bodies, Patented			
Plano Convex - - - - -	Round - - - - -	19 - - - - -	0.12 to 8.
Periscopic Convex (+1.25 Curve) - - - - -	Round - - - - -	19 - - - - -	0.12 to 8.
Other Curves, Convex - - - - -	Round - - - - -	19 - - - - -	0.12 to 8.

Kryptok, Patented. See page 224

EDGED BIFOCAL

White

STYLE	STOCK SIZE	STOCK FOCI
Cement Segments		
Plano Convex - - - - -	13 x 25 - - - - -	0.12 to 8.
Periscopic Convex (+1.25 Curve) - - - - -	13 x 25 - - - - -	0.12 to 8.
Other Curves, Convex - - - - -	13 x 25 - - - - -	0.12 to 8.
Opifex Wafers, Knife Edge on Bodies, Patented		
Plano Convex - - - - -	18 - - - - -	0.12 to 8.
Periscopic Convex (+1.25 Curve) - - - - -	18 - - - - -	0.12 to 8.
Other Curves, Convex - - - - -	18 - - - - -	0.12 to 8.

Kryptok, Patented. See page 224

Perfection Uppers or Lower, Grooved or Regular

Convex, bevel outer edge - - - - -	1, 0, 00, 000 - - - - -	0.12 to 8.
------------------------------------	-------------------------	------------

COMPLETE BIFOCAL

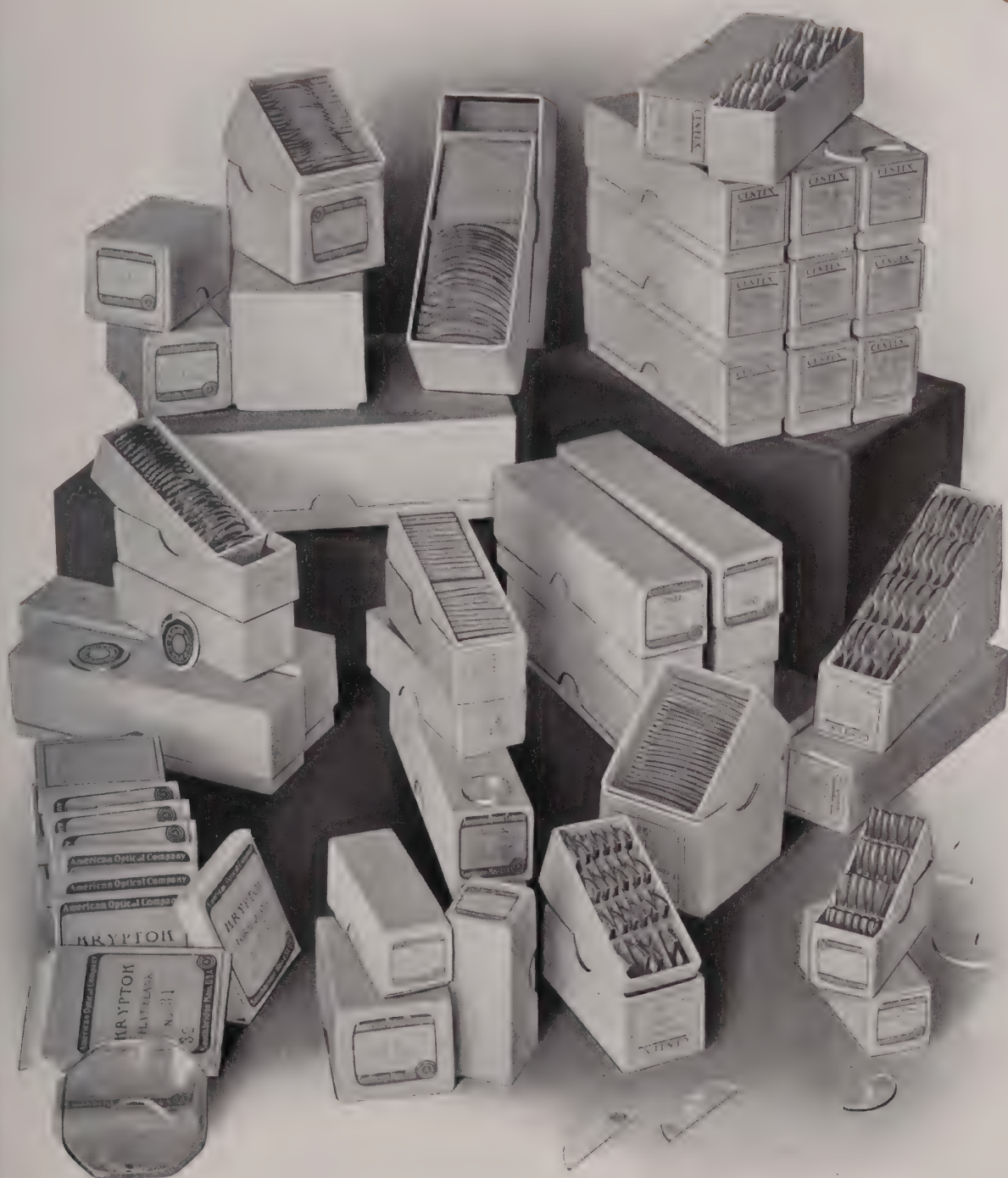
White

STYLE	EDGE	STOCK EYE SIZE	STOCK FOCI
Cement Bifocals			
Periscopic (+1.25 Curve) Convex Segment - - - - -	Bevel - - - - -	1, 0, 00, 000 - - - - -	0.12 to 8.
Periscopic (+1.25 Curve) Convex Segment - - - - -	Rimless - - - - -	0, 00, 000 - - - - -	0.12 to 8.
Opifex Bifocals, 18 mm. Segment, Patented			
Periscopic (+1.25 Curve) Convex Wafer - - - - -	Bevel - - - - -	1, 0, 00, 000 - - - - -	0.12 to 4.25
Periscopic (+1.25 Curve) Convex Wafer - - - - -	Rimless - - - - -	0, 00, 000 - - - - -	0.12 to 4.25
Meniscus (+6. Curve) Convex Wafer - - - - -	Bevel - - - - -	1, 0, 00, 000 - - - - -	0.12 to 4.25
Meniscus (+6. Curve) Convex Wafer - - - - -	Rimless - - - - -	0, 00, 000 - - - - -	0.12 to 4.25
Kryptok Bifocals, Patented. See page 224			
*Perfection Bifocals, Grooved or Regular			
Convex with Convex lowers - - - - -	Bevel - - - - -	1, 0, 00, 000 - - - - -	0.12 to 8.
Split Bifocals			
Convex with Convex lowers - - - - -	Bevel - - - - -	1, 0, 00, 000 - - - - -	0.12 to 8.

For "Secons" Bifocal Lenses, see page 225.

Edged and Split Cement Segments supplied on order.

*Perfection Bifocals supplied complete when ordered set in frames.



AOCO CENTEX LENSES
BIFOCAL

For description, see opposite page

AOCO CENTEX LENSES
UNCUT KRYPTOK BIFOCAL. — PATENTED
 White

FORM	SHAPE	SIZE	THICKNESS
Blanks			
Flat	Square, round corners	47	4 to 7
Toric	Square, round corners	47	4 to 7
Rough, one side ground and polished			
Flat	Square, round corners	47	3 to 6
Toric	Square, round corners	47	3 to 6

All AOCO Kryptok blanks are tested for strain under the Colmascope.

Finished Lenses The finishing of Kryptok blanks and rough lenses is confined to the wholesale trade and to those dealers who are equipped to do surface grinding. We supply Kryptok blanks and rough lenses in the United States through licensed wholesalers. These are carried in AOCO stock in flat and toric (6. curve) form. They can be finished to any prescription as follows:

Plano	- -	Cylinder	- - -	Plano Prism	- -	Cylinder Prism
Sphero	- -	Sphero Cylinder	- - -	Sphero Prism	- -	Sphero Cylinder Prism

To render it easy to order these blanks and rough lenses we have prepared complete focus charts with comprehensive instructions as to their use. These will be gladly furnished free upon request to those interested.

AOCO Kryptoks have this Company's monogram embossed out of the surface of the blank in addition to the name Kryptok and the blank number. This is a certain means for the identification of the genuine AOCO Kryptok lenses.

An extra charge is made if any of the following special details are wanted on orders for Kryptoks:

Colored Lenses.

Lenses larger than can be made from the regular 47 mm. blanks.

Flat blanks with convex or concave curve greater than 4. D.

Flat blanks thicker than 7 mm.

Cataract Lenses (8.50 to 20. D).

Segments larger than regular size.

Toric blanks with segments fused on inner curve.

Kryptok lenses are manufactured by the AOCO under license issued by patentees by virtue of U. S. patents Nos. 637, 444 (Nov. 21, 1899) and 876, 933 (Jan. 21, 1908).

AOCO SECONS LENSES

UNCUT SPHERICAL

White

SHAPE	SIZE	THICKNESS	STOCK FOCI
Periscopic Convex and Periscopic Concave, 1.25 Curve			
Oval	34 x 44	Standard and Rimless	0.12 to 8.
Double Convex and Double Concave			
Oval	34 x 44	Standard and Rimless	0.12 to 8.
Round	42	Standard	0.12 to 8.

UNCUT PLANO

SHAPE	SIZE	THICKNESS
Meniscus Plano, 1.25 Curve (White)		
Oval	34 x 44	Standard and Rimless
Plano (White, Blue, Smoke)		
Oval	34 x 44	Standard and Rimless
Round	42	Standard and Rimless
Coquille and Mi-coquille (White, Amber, Blue, Smoke)		
Oval	34 x 44	Standard
Oval	40 x 50	Standard
Oval	50 x 60	Standard
Oval	60 x 70	Standard
Auto Plano, Non-optical Glass (White)		
Oval	34 x 44	Standard
Oval	54 x 63	Standard
Oval	61 x 70	Standard

EDGED SPHERICAL

White

EDGE	STOCK EYE SIZES	STOCK FOCI
Periscopic Convex and Periscopic Concave, 1.25 Curve		
Bevel	1, 0, 00	0.12 to 8.
Rimless	0, 00	0.12 to 8.
Double Convex and Double Concave		
Bevel	1, 0, 00	0.12 to 8.
Rimless	0, 00	0.12 to 8.
Split Bifocals Complete, Convex with Convex Reading Segment		
Bevel	1, 0, 00	0.12 to 8.

EDGED PLANO

EDGE	STOCK EYE SIZES
Meniscus Plano, 1.25 Curve (White)	
Bevel	1, 0, 00
Rimless	0, 00
Plano (White, Amber, Blue, Smoke)	
Bevel	1, 0, 00
Rimless	0, 00
Coquille and Mi-coquille (White, Amber, Blue, Smoke)	
Bevel	1, 0, 00
Rimless	0, 00

For description of the term "Secons", see page 197.

Drilled Rimless Edge "Secons" carried in stock.

For Auto Lenses, see page 228.



AOCO OPTICAL GLASS BLANKS

Rough Both Sides, for Surface Grinding—White, Amber, Blue, Smoke, Amethyst and Euphos

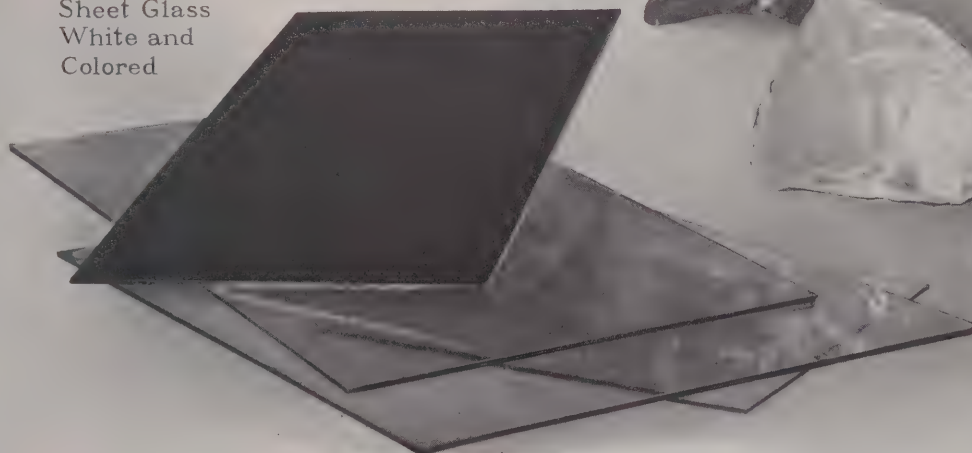
SHAPE	SIZE	THICKNESS—WHITE	THICKNESS—COLORED
Meniscus Blanks			
Round, 6. Curve	47	2 to 10	2 to 10
Round, 6. Curve	51	2 to 7	2 to 7
Round, 6. Curve	63	2 to 7	2 to 7
Round, 6. Curve	71	2 to 7	2 to 7
Round, 6. Curve	80	2 to 7	2 to 7
Round, 9. Curve	47	2 to 10	2 to 7
Flat Blanks			
Oval	34 x 44	2 to 5	2 to 5
Square	42	2 to 10	2 to 7
Round	47	2 to 10	2 to 7
Round	51	2 to 7	2 to 7
Round	63	2 to 7	2 to 7
Round	71	2 to 7	2 to 7
Round	80	2 to 7	2 to 7
Square (Pebble)	42	2 to 1	

For Kryptok Blanks, see page 224.

Base curve of Meniscus Blanks is approximately curve given so that a minimum amount of stock need be removed in surfacing.
All AOCO Lens Blanks are tested for strain under the Colmascope.



Sheet Glass
White and
Colored



Glass Chunks
White and
Colored



AOCO OPTICAL GLASS IN SHEETS

White and Colors

COLOR	SHADES	SIZE	THICKNESS
White	- - - - -	208 x 214	2 to 12
Amber	- - - D (light) and B (dark)	208 x 214	2 to 6
Blue	- - - 0 to 7	208 x 214	2 to 6
Smoke	- - - 0 to 7	208 x 214	2 to 6
Amethyst	- - - Light and Dark	208 x 214	2 to 4
Euphos	- - - Light and Dark	208 x 214	2 to 4

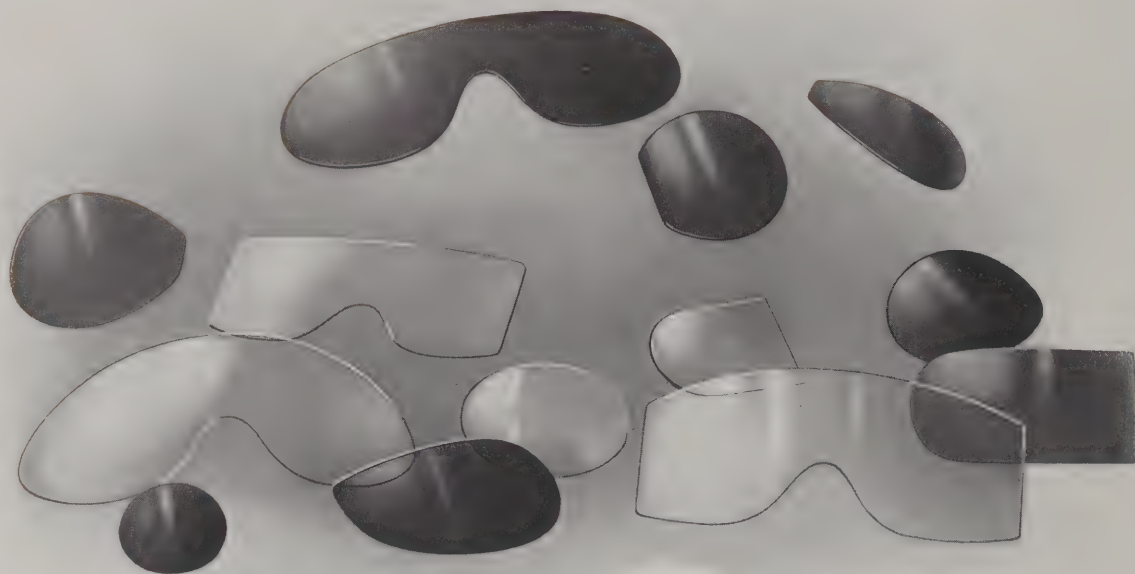
Special sizes cut to order. Glass stock is usually cut in multiples of 42 mm. square.

White glass supplied in either 1.507 or 1.523 index.

All sizes and thicknesses given above are in mm.

AOCO OPTICAL GLASS IN CHUNKS

Catalogue No. M 260. This material is used only for window and show-case display purposes and is supplied white or in colors such as amber, blue, green, etc. It is sold by the pound, chunks varying in weight from one to five pounds. State color and approximate weight wanted in ordering.



AOCO AUTOMOBILE GOGGLE LENSES

The above illustration graphically shows the wide range of possibilities in the making of lenses for auto goggles, driving and shooting spectacles. In addition to the several sizes and forms required for use in the AOCO goggle line we make all those sizes in general demand for the imported goggles, which include the "whole-front" or single lens types shown above. Our facilities for work of this nature are exceptionally good and the results we achieve are unquestionably superior in quality particularly as to the clarity of stock used and perfection of edge and curves. On the "whole-front" types we make it a point to keep in touch with the latest importations to be able to provide extra lenses exact as to size and curve.

Colors We regularly supply goggle lenses with bevel edge in the following colors : White, amber, blue and smoke. Other colors are : Amethyst, pink, green and euphos, supplied only on special order.

Regular Forms In ordering lenses for AOCO goggles give color, size of eye and catalogue number of goggle, stating whether curved or flat lenses are required.

Special Forms If special shapes not regularly used for AOCO goggles are required it is necessary to send sample lens or goggle. Blue print charts showing actual sizes of regular and special shapes are furnished to wholesalers for convenience in ordering.

TRIAL SETS TRIAL FRAMES AND ACCESSORIES





TRIAL SETS, TRIAL FRAMES AND ACCESSORIES

NO branch of our business demands more careful treatment, more attention to detail than the manufacture of trial sets. The refractionist must largely depend upon the accuracy of his trial lenses for the correctness of his work, and in making the selection of this necessary adjunct to his equipment he has little to aid him, but must depend almost solely upon the standing and reliability of the maker.

It therefore behooves us to carefully guard the enviable reputation of our trial sets, which has already been instrumental in marketing our annual production of over 3000 sets.

The quality of stock, superiority of finish and durability of construction are details carefully considered in connection with accuracy of foci.

In connection with our comprehensive line of trial sets we would call especial attention to our various trial frames, many of the most desirable and practicable patterns of which are protected by Letters Patent owned by us. We believe we are justified in claiming this line includes the best and most popular trial frames made, which is best evidenced by the large quantity of these goods we are making.

INFORMATION FOR ORDERING

On the following pages will be found schedules showing the exact contents and list of foci of lenses regularly supplied in the various trial sets illustrated. We strongly urge the selection of some one of these various regular contents, as among them we feel sure an assortment will be found answering practically any requirement, and thereby delay in the filling of an order is largely avoided and expense saved.

All lenses, including prisms, are ground in the dioptral system, and focus strips are printed in this system only.

All trial sets except the pocket styles are regularly supplied with white celluloid strips, stamped with focus and filled with black, making them clear and indelible.

All of the larger styles of trial sets are made with removable trays, and, unless otherwise ordered, velvet lined trays are supplied. We would call especial attention to our all-wood trays, which are gaining in popularity owing to their cleanliness and durability.

All-wood Tray If an all-wood tray is ordered in connection with an all-wood case the order should be explicit. Thus: No. 2121 oak trial set with all-wood oak tray, or use No. 02121.

All trays, except in traveling style cases, are made skeleton construction, allowing dust to fall on removable pad under the tray, making it very convenient to keep the trial set clean.

All trays in office and dress suit style cases containing contents A, B, C, D, H are interchangeable.

Office Style All office style trial sets are covered with black seal grain leather and have velvet lined removable trays. If all-wood tray is desired order must so state. All cases have nickel-plated locks, catches, quadrant stops and hinges.

Office Style, Hard Wood Our oak cases are made of fully seasoned selected quartered stock, finely finished. All have removable trays velvet lined. If all-wood tray is desired order must so state. Cases are also furnished in mahogany if so ordered.

Automatic Tray Tilting Attachment This provides a means of automatically raising and lowering back of tray when case is opened or closed. This attachment will be furnished at a slight extra charge upon any office style cases except roll and glass front cabinets. See illustration, page 240.

Office Style, Roll and Glass Front Cabinets Our upright cabinets are made of fully seasoned selected quartered oak, finely finished. All have removable trays velvet lined. If all-wood tray is desired order must so state. Trays are arranged to draw forward, making the lenses easily accessible. Cabinets can also be furnished in mahogany if so ordered.

Finish of Oak Cases Oak cases are finished antique color (light) unless otherwise ordered. Other finishes, as golden oak, mission, early English, Flemish, etc., will be furnished when order so specifies.



Tray Making



Neutralizing Trial
Set Lenses



Traveling Style Case Making

Traveling, Dress Suit and Folding Style Cases are covered with black seal grain leather with nickel-plated trimmings, including quadrant stop for cover and with removable velvet lined tray with solid bottom. Space is provided underneath tray for stock, also with removable tray for interchangeable lenses, holding one gross pairs. The cover contains a pocket for holding test types. These cases are also furnished in tan leather if so ordered. Cases also furnished with oxidized bronze trimmings instead of nickel-plated if so ordered.

Sizes of Lenses and Trial Rings Trial lenses are made in two sizes and measure exactly 36.3 mm. and 31.5 mm. in diameter. For convenience they are designated as 36 mm. and 32 mm. respectively throughout this catalogue. These sizes are sometimes designated as XX (36.3 mm.) and XXX (31.5 mm.). See page 29, Introductory Section.

Trial rings are 37.6 mm. and 32.8 mm. outside and are designated as 38 mm. and 33 mm. for convenience. The metric system has been adopted with the publication of this edition, the inch system having been discontinued. The diameter of trial rings is denoted by their respective catalogue numbers. The unit figures 0 and 1 indicate the larger rings and unit figures 3 and 4 the smaller rings. It is, therefore, not necessary to state size of rings in ordering trial sets, the above being submitted merely as a matter of information.

We have excellent facilities for filling orders for trial sets on short notice, as a large number of the staple and some special styles are constantly kept in stock.

We are prepared to make any special style of trial set to order. It will be understood that orders for regular styles can be filled more promptly, as a trial set with special assortment of lenses or requiring a specially constructed case must of necessity be made from the beginning. Furthermore, the quantity of lenses or the assortment of foci, if differing even in a single pair from a regular assortment, cannot be changed without extra charge, as special focus strips or a specially constructed case and tray would be required, adding materially to the cost.

CONTENTS "A." 30 PAIRS SPHERICALS

SPHERES—30 pairs each convex and concave as follows: 0.12, 0.25, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 8.00, 9.00, 10.00, 11.00, 12.00, 14.00, 16.00, 18.00, 20.00.

CYLINDERS—18 pairs each convex and concave as follows: 0.25, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00.

PRISMS—5½ pairs as follows: 1/24 dozen each 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20.

DISKS AND COLORED GLASSES—10 as follows: 1 each blank, pinhole, stenopeic, Maddox rod, white, red, half frosted, blue No. 4, and smoke No. 2 and No. 4 shades.

TRIAL FRAMES—No. 2387 Wells temple and No. 2220. 1 set test types.

CONTENTS "B." 32 PAIRS SPHERICALS

SPHERES—32 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.62, 0.75, 0.87, 1.00, 1.12, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 7.00, 8.00, 9.00, 10.00, 11.00, 13.00, 16.00, 20.00.

CYLINDERS—20 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00, 5.50.

PRISMS—5 pairs as follows: 1/24 dozen each 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

DISKS AND COLORED GLASSES—10 as follows: 1 each blank, pinhole; 2 stenopeic; and 1 each Maddox rod, white, half frosted, red, blue No. 2, and smoke No. 4.

TRIAL FRAMES—No. 2387 Wells temple and No. 2220. 1 set test types.

CONTENTS "C." 35 PAIRS SPHERICALS

SPHERES—35 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.62, 0.75, 0.87, 1.00, 1.12, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 8.00, 9.00, 10.00, 11.00, 12.00, 14.00, 16.00, 18.00, 20.00.

CYLINDERS—21 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.62, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00, 6.00.

PRISMS—7½ pairs as follows: 1/12 dozen each 1, 2, 3, 4; 1/24 dozen each 5, 6, 8, 10, 12, 15, 20.

DISKS AND COLORED GLASSES—14 as follows: 1 blank; 2 each pinhole and stenopeic; 1 each Maddox rod, half frosted, plano white, red, blue shades 2 and 4, smoke shades 2, 4, and 6.

TRIAL FRAMES—No. 2387 Wells temple and No. 2220. 1 set test types.

CONTENTS "D." 35 PAIRS SPHERICALS

SPHERES—35 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.62, 0.75, 0.87, 1.00, 1.12, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 8.00, 9.00, 10.00, 11.00, 12.00, 14.00, 16.00, 18.00, 20.00.

CYLINDERS—21 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.62, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00, 6.00.

PRISMS—7½ pairs as follows: 1/12 dozen each 1, 2, 3, 4; 1/24 dozen each 5, 6, 8, 10, 12, 15, 20.

DISKS AND COLORED GLASSES—18 as follows: 1 blank; 2 each pinhole, stenopeic; 1 each Maddox rod, white and red, blue shades 2 and 4, smoke shades 2, 4, and 6, half frosted, Maddox prism, chromatic test and 2 cross-lines.

TRIAL FRAMES—No. 2387 Wells temple and No. 2220. 1 set test types.

CONTENTS "E." 40 PAIRS SPHERICALS

SPHERES—40 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.62, 0.75, 0.87, 1.00, 1.12, 1.25, 1.37, 1.50, 1.62, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 3.75, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 7.50, 8.00, 9.00, 10.00, 11.00, 12.00, 13.00, 14.00, 16.00, 18.00, 20.00.

CYLINDERS—24 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.62, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 7.00, 8.00.

PRISMS—8½ pairs as follows: 1/12 dozen each 0.50, 1, 2, 3, 4; 1/24 dozen each 5, 6, 8, 10, 12, 15, 20.

DISKS AND COLORED GLASSES—23 as follows: 1 blank; 2 each pinhole, stenopeic, cross-lines; 1 each white, red, blue shades 2, 4, and 6, smoke shades 1, 2, 3, 4, 5, 6, frosted, half frosted, Maddox prism, Maddox rod and chromatic test.

TRIAL FRAMES—No. 2387 B Wells temple and No. 2220. 1 set test types.

CONTENTS "F." 20 PAIRS SPHERICALS

SPHERES—20 pairs each convex and concave as follows: 1/12 dozen 0.12, 0.25, 0.37, 0.50, 0.75, 1.00, 1.25, 1.50, 2.00, 2.50, 3.00, 3.50, 4.00, 5.00, 6.00; 1/24 dozen 7.00, 8.00, 9.00, 10.00, 11.00, 12.00, 14.00, 16.00, 18.00, 20.00.

CYLINDERS—11 pairs each convex and concave as follows: 1/12 dozen 0.12, 0.25, 0.37, 0.50, 0.75, 1.00, 1.25, 1.50; 1/24 dozen 1.75, 2.00, 2.25, 2.50, 3.00, 4.00.

PRISMS—4½ pairs as follows: 1/12 dozen each 1, 2, 3; 1/24 dozen each 5, 8, 15.

DISKS AND COLORED GLASSES—6 as follows: 1 each blank, pinhole, stenopeic, Maddox rod, white and red.

TRIAL FRAMES—No. 2308 Wells temple and No. 2220.

CONTENTS "G." 14 PAIRS SPHERICALS

SPHERES—14 pairs each convex and concave as follows: 0.12, 0.25, 0.50, 0.75, 1.00, 1.50, 2.00, 2.50, 3.00, 4.00, 5.00, 6.00, 7.00, 8.00.

CYLINDERS—9 pairs each convex and concave as follows: 0.12, 0.25, 0.50, 0.75, 1.00, 1.50, 2.00, 2.50, 3.00.

DISKS AND COLORED GLASSES—6 as follows: 1 each blank, pinhole, stenopeic, Maddox rod, Maddox prism and red.

TRIAL FRAME—No. 2268 3 cell trial frame.

CONTENTS "H." 28 PAIRS SPHERICALS

SPHERES—28 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 8.00, 9.00, 10.00, 11.00, 13.00, 16.00.

CYLINDERS—17 pairs each convex and concave as follows: 0.12, 0.25, 0.37, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.50, 4.00, 5.00.

PRISMS—4 pairs as follows: 1/24 dozen each 1, 2, 3, 4, 5, 6, 8, 10.

DISKS AND COLORED GLASSES—9 as follows: 1 each blank, pinhole, stenopeic, white, red, blue, smoke shades 2 and 4, and Maddox rod.

TRIAL FRAMES—No. 2387 Wells temple and No. 2220. 1 set test types.

CONTENTS "I." 6 PAIRS SPHERICALS

SPHERES—6 pairs each convex and concave as follows: 0.25, 0.50, 0.75, 1.00, 2.00, 3.00.

CYLINDERS—6 pairs each convex and concave as follows: 0.25, 0.50, 0.75, 1.00, 2.00, 3.00.

DISKS AND COLORED GLASSES—5 as follows: 1 each blank, pinhole, stenopeic, Maddox rod and red.

TRIAL FRAME—No. 2268 3 cell trial frame.

CONTENTS "K." PRISM SET

PRISMS—10 pairs as follows: 1/12 dozen each 0.50, 1.00, 1.50, 2.00, 2.50, 3.00, 3.50, 4.00; 1/24 dozen each 5, 10, 15, 20. Furnished with 38 mm square prisms or 36 mm. round in 1801 rings as ordered.

CONTENTS "L." 24 PAIRS SPHERICALS

SPHERES—24 pairs each convex and concave as follows: 0.25, 0.37, 0.50, 0.62, 0.75, 0.87, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 7.00, 8.00.

TRIAL FRAME—No. 2220.

CONTENTS "BB," "LONDON SPECIAL." 32 PAIRS SPHERICALS

SPHERES—32 pairs each convex and concave as follows: 0.25, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 3.75, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 8.00, 9.00, 10.00, 11.00, 12.00, 13.00, 14.00, 16.00, 18.00, 20.00.

CYLINDERS—20 pairs each convex and concave as follows: 0.25, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 7.00.

PRISMS—7 1/2 pairs as follows: 1/12 dozen each 1, 2, 3, 4; 1/24 dozen each 5, 6, 8, 10, 12, 15, 20.

DISKS AND COLORED GLASSES—39 as follows: 1 blank; 2 pinholes; 1 each stenopeic, Maddox prism, multiple red Maddox rod and chromatic test; 2 each cross cylinders and cross lines; 1 each plain white, red, amber and frosted; 6 pairs each blue and smoke, shades, 1, 2, 3, 4, 5, 6.

TRIAL FRAMES—No. 2387 Wells extension temple and No. 2220. 1 set test types, Nos. 3550, 3551, 3552 and 3555.

Any specification or detail, not included in the foregoing, is subject to an extra charge.

Trial sets with any of the following details of special construction, may be had by so specifying upon the order:

Solid wood tray.
Leather covered tray.
Leather covered tray with
leather lens partitions.
Beveled glass top.
Drawer in case.
1802 or 1812 style rings.

Gold-plated minus rings.
Gold-filled rings.
Black oxidized ring with
white focus numbers.
Special disks (see page 264).
Cylinder lenses with axis
dotted.

Cylinder lenses with Stevenson's axis
marking.
Name printed on ribbon.
Focus etched on lenses.
Tray tilting attachment (see page 240).
Black focus strips with white marking.



Illustrating No. 2000 Trial Set, closed.

Illustrating No. 2060 Trial Set, open.

Illustrating No. 2021 Trial Set, with drawer.

OFFICE STYLES, LEATHER COVERED

NUMBER DESCRIPTION, 30 PAIRS SPHERICALS, 18 PAIRS CYLINDERS, CONTENTS "A." See Page 233

- 2000 Black seal grain leather covered, velvet lined case, removable tray. Lenses 36 mm. in 1806 Nachet test rings.
- 2001 Same as No. 2000, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2003 Same as No. 2000, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2004 Same as No. 2000, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 32 PAIRS SPHERICALS, 20 PAIRS CYLINDERS, CONTENTS "B." See Page 233

- 2010 Black seal grain leather covered, velvet lined case, removable tray. Lenses 36 mm. in 1806 Nachet test rings.
- 2011 Same as No. 2010, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2013 Same as No. 2010, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2014 Same as No. 2010, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "C." See Page 233

- 2020 Black seal grain leather covered, velvet lined case, removable tray. Lenses 36 mm. in 1806 Nachet test rings.
- 2021 Same as No. 2020, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2023 Same as No. 2020, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2024 Same as No. 2020, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "D." See Page 234

- 2030 Black seal grain leather covered, velvet lined case, removable tray. Lenses 36 mm. in 1806 Nachet test rings.
- 2031 Same as No. 2030, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2033 Same as No. 2030, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2034 Same as No. 2030, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 40 PAIRS SPHERICALS, 24 PAIRS CYLINDERS, CONTENTS "E." See Page 234

- 2040 Black seal grain leather covered, velvet lined case, removable tray. Lenses 36 mm. in 1806 Nachet test rings.
- 2041 Same as No. 2040, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2043 Same as No. 2040, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2044 Same as No. 2040, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 28 PAIRS SPHERICALS, 17 PAIRS CYLINDERS, CONTENTS "H." See Page 235

- 2060 Black seal grain leather covered, velvet lined case, removable tray. Lenses 36 mm. in 1806 Nachet test rings.
- 2061 Same as No. 2060, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2063 Same as No. 2060, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2064 Same as No. 2060, except 1804 Nachet test rings. Lenses, 32 mm.

Above cases are same style as No. 2060. See illustration on opposite page.



Illustrating No. 2071 Trial Set, closed.

Illustrating No. 2071 Trial Set, open.

Illustrating No. 2080 Trial Set, open.

OFFICE STYLES, LEATHER COVERED—*Continued*

NUMBER	DESCRIPTION, 20 PAIRS SPHERICALS, 11 PAIRS CYLINDERS, CONTENTS "F." See Page 234
2070	Black seal grain leather covered, velvet lined case, removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
2071	Same as No. 2070, except 1801 Alumnico test rings. Lenses, 36 mm.
2073	Same as No. 2070, except 1803 Alumnico test rings. Lenses, 32 mm.
2074	Same as No. 2070, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 20 PAIRS SPHERICALS, 11 PAIRS CYLINDERS, CONTENTS "F." See Page 234

2080	Black seal grain leather covered, velvet lined case, removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
2081	Same as No. 2080, except 1801 Alumnico test rings. Lenses, 36 mm.
2083	Same as No. 2080, except 1803 Alumnico test rings. Lenses, 32 mm.
2084	Same as No. 2080, except 1804 Nachet test rings. Lenses, 32 mm.

No. 2080 style case is uniform in size with office cases designed to hold contents A, B, C, D and H
See illustration on opposite page.



Office Style Case Making

(A)



Illustrating No. 2121 Oak, glass top with drawer.

Illustrating No. 02141 Oak, all-wood tray, with automatic tray tilting attachment. See page 231.

In ordering give complete specifications in addition to catalogue number

OFFICE STYLES, HARD WOOD

NUMBER DESCRIPTION, 30 PAIRS SPHERICALS, 18 PAIRS CYLINDERS, CONTENTS "A." See Page 233

- 2100 Polished hard wood (oak or mahogany) case, with velvet lined removable tray. Lenses, 36 mm.
in 1806 Nachet test rings.
- 2101 Same as No. 2100, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2103 Same as No. 2100, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2104 Same as No. 2100, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 32 PAIRS SPHERICALS, 20 PAIRS CYLINDERS, CONTENTS "B." See Page 233

- 2110 Polished hard wood (oak or mahogany) case, with velvet lined removable tray. Lenses, 36 mm.
in 1806 Nachet test rings.
- 2111 Same as No. 2110, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2113 Same as No. 2110, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2114 Same as No. 2110, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "C." See Page 233

- 2120 Polished hard wood (oak or mahogany) case, with velvet lined removable tray. Lenses, 36 mm.
in 1806 Nachet test rings.
- 2121 Same as No. 2120, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2123 Same as No. 2120, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2124 Same as No. 2120, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "D." See Page 234

- 2130 Polished hard wood (oak or mahogany) case, with velvet lined removable tray. Lenses, 36 mm.
in 1806 Nachet test rings.
- 2131 Same as No. 2130, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2133 Same as No. 2130, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2134 Same as No. 2130, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 40 PAIRS SPHERICALS, 24 PAIRS CYLINDERS, CONTENTS "E." See Page 234

- 2140 Polished hard wood (oak or mahogany) case, with velvet lined removable tray. Lenses, 36 mm.
in 1806 Nachet test rings.
- 2141 Same as No. 2140, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2143 Same as No. 2140, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2144 Same as No. 2140, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 28 PAIRS SPHERICALS, 17 PAIRS CYLINDERS, CONTENTS "H." See Page 235

- 2160 Polished hard wood (oak or mahogany) case, with velvet lined removable tray. Lenses, 36 mm.
in 1806 Nachet test rings.
- 2161 Same as No. 2160, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2163 Same as No. 2160, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2164 Same as No. 2160, except 1804 Nachet test rings. Lenses, 32 mm.

Above cases are same style as No. 02141, shown on opposite page. (All-wood tray, automatic tray tilting attachment, drawer in case or glass top, extra.)



Illustrating No. 2511 Mahogany roll top; closed.

Illustrating No. 02511 Oak roll top; open, with all-wood tray.

ROLL FRONT CABINET

NUMBER DESCRIPTION, 30 PAIRS SPHERICALS, 18 PAIRS CYLINDERS, CONTENTS "A." See Page 233

- 2500 Polished hard wood (oak or mahogany) cabinet, with roll front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2501 Same as No. 2500, except 1801 Alumnico test rings. Lenses, 36 mm.
 2503 Same as No. 2500, except 1803 Alumnico test rings. Lenses, 32 mm.
 2504 Same as No. 2500, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 32 PAIRS SPHERICALS, 20 PAIRS CYLINDERS, CONTENTS "B." See Page 233

- 2510 Polished hard wood (oak or mahogany) cabinet, with roll front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2511 Same as No. 2510, except 1801 Alumnico test rings. Lenses, 36 mm.
 2513 Same as No. 2510, except 1803 Alumnico test rings. Lenses, 32 mm.
 2514 Same as No. 2510, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "C." See Page 233

- 2520 Polished hard wood (oak or mahogany) cabinet, with roll front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2521 Same as No. 2520, except 1801 Alumnico test rings. Lenses, 36 mm.
 2523 Same as No. 2520, except 1803 Alumnico test rings. Lenses, 32 mm.
 2524 Same as No. 2520, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "D." See Page 234

- 2530 Polished hard wood (oak or mahogany) cabinet, with roll front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2531 Same as No. 2530, except 1801 Alumnico test rings. Lenses, 36 mm.
 2533 Same as No. 2530, except 1803 Alumnico test rings. Lenses, 32 mm.
 2534 Same as No. 2530, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 40 PAIRS SPHERICALS, 24 PAIRS CYLINDERS, CONTENTS "E." See Page 234

- 2540 Polished hard wood (oak or mahogany) cabinet, with roll front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2541 Same as No. 2540, except 1801 Alumnico test rings. Lenses, 36 mm.
 2543 Same as No. 2540, except 1803 Alumnico test rings. Lenses, 32 mm.
 2544 Same as No. 2540, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 28 PAIRS SPHERICALS, 17 PAIRS CYLINDERS, CONTENTS "H." See Page 235

- 2560 Polished hard wood (oak or mahogany) cabinet, with roll front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2561 Same as No. 2560, except 1801 Alumnico test rings. Lenses, 36 mm.
 2563 Same as No. 2560, except 1803 Alumnico test rings. Lenses, 32 mm.
 2564 Same as No. 2560, except 1804 Nachet test rings. Lenses, 32 mm.

Above cases are same style as No. 2511. See illustration on opposite page.



Illustrating No. 2241 Oak, glass front, with method of disposing of glass front.
Illustrating No. 2241 Oak, glass front; closed.

GLASS FRONT CABINET

NUMBER DESCRIPTION, 30 PAIRS SPHERICALS, 18 PAIRS CYLINDERS, CONTENTS "A." See Page 233

- 2200 Polished hard wood (oak or mahogany) cabinet, with glass front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2201 Same as No. 2200, except 1801 Alumnico test rings. Lenses, 36 mm.
 2203 Same as No. 2200, except 1803 Alumnico test rings. Lenses, 32 mm.
 2204 Same as No. 2200, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 32 PAIRS SPHERICALS, 20 PAIRS CYLINDERS, CONTENTS "B." See Page 233

- 2210 Polished hard wood (oak or mahogany) cabinet, with glass front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2211 Same as No. 2210, except 1801 Alumnico test rings. Lenses, 36 mm.
 2213 Same as No. 2210, except 1803 Alumnico test rings. Lenses, 32 mm.
 2214 Same as No. 2210, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "C." See Page 233

- 2220 Polished hard wood (oak or mahogany) cabinet, with glass front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2221 Same as No. 2220, except 1801 Alumnico test rings. Lenses, 36 mm.
 2223 Same as No. 2220, except 1803 Alumnico test rings. Lenses, 32 mm.
 2224 Same as No. 2220, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "D." See Page 234

- 2230 Polished hard wood (oak or mahogany) cabinet, with glass front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2231 Same as No. 2230, except 1801 Alumnico test rings. Lenses, 36 mm.
 2233 Same as No. 2230, except 1803 Alumnico test rings. Lenses, 32 mm.
 2234 Same as No. 2230, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 40 PAIRS SPHERICALS, 24 PAIRS CYLINDERS, CONTENTS "E." See Page 234

- 2240 Polished hard wood (oak or mahogany) cabinet, with glass front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2241 Same as No. 2240, except 1801 Alumnico test rings. Lenses, 36 mm.
 2243 Same as No. 2240, except 1803 Alumnico test rings. Lenses, 32 mm.
 2244 Same as No. 2240, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 28 PAIRS SPHERICALS, 17 PAIRS CYLINDERS, CONTENTS "H." See Page 235

- 2260 Polished hard wood (oak or mahogany) cabinet, with glass front and two drawers, velvet lined removable tray. Lenses, 36 mm. in 1806 Nachet test rings.
 2261 Same as No. 2260, except 1801 Alumnico test rings. Lenses, 36 mm.
 2263 Same as No. 2260, except 1803 Alumnico test rings. Lenses, 32 mm.
 2264 Same as No. 2260, except 1804 Nachet test rings. Lenses, 32 mm.

Above cases are same style as No. 2241. See illustration on opposite page.



Illustrating No. 2031 Tan and Seal D. S.: open and closed.
Illustrating No. 2071 Tan and Seal D. S.: open and closed.

DRESS SUIT STYLE

NUMBER DESCRIPTION, 30 PAIRS SPHERICALS, 18 PAIRS CYLINDERS, CONTENTS "A." See Page 233

- 2600 Black seal grain leather covered, velvet lined dress suit case, with removable tray and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
- 2601 Same as No. 2600, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2603 Same as No. 2600, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2604 Same as No. 2600, except 1804 Nachet test rings. Lenses, 32 mm.
Same style case as No. 2671.

DESCRIPTION, 32 PAIRS SPHERICALS, 20 PAIRS CYLINDERS, CONTENTS "B." See Page 233

- 2610 Black seal grain leather covered, velvet lined dress suit case, with removable tray and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
- 2611 Same as No. 2610, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2613 Same as No. 2610, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2614 Same as No. 2610, except 1804 Nachet test rings. Lenses, 32 mm.
Same style case as No. 2671.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "C." See Page 233

- 2620 Black seal grain leather covered, velvet lined dress suit case, with removable tray and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
- 2621 Same as No. 2620, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2623 Same as No. 2620, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2624 Same as No. 2620, except 1804 Nachet test rings. Lenses, 32 mm.
Same style case as No. 2671.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "D." See Page 234

- 2630 Black seal grain leather covered, velvet lined dress suit case, with removable tray and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
- 2631 Same as No. 2630, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2633 Same as No. 2630, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2634 Same as No. 2630, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 40 PAIRS SPHERICALS, 24 PAIRS CYLINDERS, CONTENTS "E." See Page 234

- 2640 Black seal grain leather covered, velvet lined dress suit case, with removable tray and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
- 2641 Same as No. 2640, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2643 Same as No. 2640, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2644 Same as No. 2640, except 1804 Nachet test rings. Lenses, 32 mm.
Same style case as No. 2671.

DESCRIPTION, 28 PAIRS SPHERICALS, 17 PAIRS CYLINDERS, CONTENTS "H." See Page 235

- 2660 Black seal grain leather covered, velvet lined dress suit case, with removable tray and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
- 2661 Same as No. 2660, except 1801 Alumnico test rings. Lenses, 36 mm.
- 2663 Same as No. 2660, except 1803 Alumnico test rings. Lenses, 32 mm.
- 2664 Same as No. 2660, except 1804 Nachet test rings. Lenses, 32 mm.
Same style case as No. 2671.

Above cases are same style as shown on opposite page.

Tan leather dress suit case furnished when so ordered.



Illustrating No. 2721 Folding: closed and open.

DRESS SUIT STYLE—*Continued*

NUMBER	DESCRIPTION, 20 PAIRS SPHERICALS, 11 PAIRS CYLINDERS, CONTENTS "F." See Page 234
2670	Black seal grain leather covered, velvet lined case, dress suit style, removable tray with space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
2671	Same as No. 2670, except 1801 Alumnico test rings. Lenses, 36 mm.
2673	Same as No. 2670, except 1803 Alumnico test rings. Lenses, 32 mm.
2674	Same as No. 2670, except 1804 Nachet test rings. Lenses, 32 mm. Same style case as No. 2671.

See illustration on page 246.

FOLDING STYLE

NUMBER	DESCRIPTION, 30 PAIRS SPHERICALS, 18 PAIRS CYLINDERS, CONTENTS "A." See Page 233
2700	Black seal grain leather covered, velvet lined, folding style case, with two removable trays and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
2701	Same as No. 2700, except 1801 Alumnico test rings. Lenses, 36 mm.
2703	Same as No. 2700, except 1803 Alumnico test rings. Lenses, 32 mm.
2704	Same as No. 2700, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 32 PAIRS SPHERICALS, 20 PAIRS CYLINDERS, CONTENTS "B." See Page 233

2710	Black seal grain leather covered, velvet lined, folding style case, with two removable trays and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
2711	Same as No. 2710, except 1801 Alumnico test rings. Lenses, 36 mm.
2713	Same as No. 2710, except 1803 Alumnico test rings. Lenses, 32 mm.
2714	Same as No. 2710, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "C." See Page 233

2720	Black seal grain leather covered, velvet lined, folding style case, with two removable trays and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
2721	Same as No. 2720, except 1801 Alumnico test rings. Lenses, 36 mm.
2723	Same as No. 2720, except 1803 Alumnico test rings. Lenses, 32 mm.
2724	Same as No. 2720, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "D." See Page 234

2730	Black seal grain leather covered, velvet lined, folding style case, with two removable trays and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
2731	Same as No. 2730, except 1801 Alumnico test rings. Lenses, 36 mm.
2733	Same as No. 2730, except 1803 Alumnico test rings. Lenses, 32 mm.
2734	Same as No. 2730, except 1804 Nachet test rings. Lenses, 32 mm.

See illustration on opposite page.



Illustrating No. 2090 Spherical; open.
 Illustrating No. 2790 Spherical; open.
 Illustrating No. 3025 Bifocal; open. No. 3025 lens. Patented.
 Illustrating No. 3026 Cement Bifocal lens.

FOLDING STYLE—*Continued*

NUMBER	DESCRIPTION, 40 PAIRS SPHERICALS, 24 PAIRS CYLINDERS, CONTENTS "E." See Page 234
2740	Black seal grain leather covered, velvet lined, folding style case, with two removable trays and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
2741	Same as No. 2740, except 1801 Alumnico test rings. Lenses, 36 mm.
2743	Same as No. 2740, except 1803 Alumnico test rings. Lenses, 32 mm.
2744	Same as No. 2740, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 28 PAIRS SPHERICALS, 17 PAIRS CYLINDERS, CONTENTS "H." See Page 235

2760	Black seal grain leather covered, velvet lined, folding style case, with two removable trays and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
2761	Same as No. 2760, except 1801 Alumnico test rings. Lenses, 36 mm.
2763	Same as No. 2760, except 1803 Alumnico test rings. Lenses, 32 mm.
2764	Same as No. 2760, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, 20 PAIRS SPHERICALS, 11 PAIRS CYLINDERS, CONTENTS "F." See Page 234

2770	Black seal grain leather covered, velvet lined, folding style case, with two removable trays and space for stock. Lenses, 36 mm. in 1806 Nachet test rings.
2771	Same as No. 2770, except 1801 Alumnico test rings. Lenses, 36 mm.
2773	Same as No. 2770, except 1803 Alumnico test rings. Lenses, 32 mm.
2774	Same as No. 2770, except 1804 Nachet test rings. Lenses, 32 mm.

Above cases are same style as No. 2721. See illustration on page 248.

SPHERICAL SETS

NUMBER	DESCRIPTION, OFFICE STYLE, 24 PAIRS SPHERICALS, CONTENTS "L." See Page 235
2090	Black seal grain leather covered, velvet lined case, as illustrated. Lenses in 1806 Nachet test rings. Lenses, 36 mm.
2094	Same as No. 2090, except 1804 Nachet test rings. Lenses, 32 mm.

DESCRIPTION, FOLDING STYLE, 24 PAIRS SPHERICALS, CONTENTS "L." See Page 235

2790	Black seal grain leather covered, folding style case, velvet lined, with removable trays and space for stock. Lenses in 1806 Nachet test rings. Lenses, 36 mm.
2794	Same as No. 2790, except 1804 Nachet test rings. Lenses, 32 mm.

BIFOCAL SETS

NUMBER	DESCRIPTION, 12 PAIRS SPHERICALS + .50 D. TO + 3.25 D.
3025	Black seal grain leather covered case, as illustrated. Beveled edge bifocal segments, 18 mm. round, in rims set in 1801 rings, 38 mm. Patented.
3026	Same as No. 3025, except cement segments on plano uppers. Segments, 18 mm. round; 1801 rings, 38 mm.
	Contents of No. 3025 or 3026 may be supplied with contents, "A," "B," "C," "D," "E" and "H," in office style or travelling cases when so ordered. See pages 233, 234 and 235.
	Nos. 3025 and 3026 Bifocal sets also furnished with 18 mm. segments, in rims set in 1803 rings, 33 mm. when so ordered.

See illustration on opposite page.



Illustrating No. 2821 Physicians' Trial Set.
Illustrating No. 2961 Quaker City Trial Set; open and closed.

PHYSICIANS' STYLE

NUMBER DESCRIPTION, 35 PAIRS SPHERICALS, 21 PAIRS CYLINDERS, CONTENTS "C." See Page 233

- 2821 Black seal grain leather covered case, physicians' style, as illustrated, with four velvet lined removable trays. Lenses in 1801 Alumnico test rings. Lenses, 36 mm.
- 2823 Same as No. 2821, except 1803 Alumnico test rings. Lenses, 32 mm.

DESCRIPTION, 20 PAIRS SPHERICALS, 11 PAIRS CYLINDERS, CONTENTS "F." See Page 234

- 2871 Black seal grain leather covered case, physicians' style, with three velvet lined removable trays. Lenses in 1801 Alumnico test rings. Lenses, 36 mm.
- 2873 Same as No. 2871, except 1803 Alumnico test rings. Lenses, 32 mm.
Same style case as No. 2821.

See illustration on opposite page.

QUAKER CITY FOLDING STYLE

NUMBER DESCRIPTION, 28 PAIRS SPHERICALS, 17 PAIRS CYLINDERS, CONTENTS "H." See Page 235

- 2961 Black seal grain leather covered case, Quaker City folding style, as illustrated, velvet lined, without removable trays. Lenses, 36 mm. in 1801 Alumnico test rings.
- 2963 Same as No. 2961, except 1803 Alumnico test rings. Lenses, 32 mm.

DESCRIPTION, 20 PAIRS SPHERICALS, 11 PAIRS CYLINDERS, CONTENTS "F." See Page 234

- 2971 Black seal grain leather covered case, Quaker City folding style, as illustrated, velvet lined, without removable trays. Lenses, 36 mm. in 1801 Alumnico test rings.
- 2973 Same as No. 2971, except 1803 Alumnico test rings. Lenses, 32 mm.
Same style case as No. 2961.

See illustration on opposite page.





Illustrating No. 2009-1 Trial Set, open.

Illustrating No. 2109-1 Trial Set, with London Base, closed.

Illustrating No. 2109-1, Trial Set, with Beveled Glass Top, Drawer, Extension Top and London Base, closed.



POCKET SETS

- | | |
|--------|--|
| NUMBER | DESCRIPTION. POCKET SENIOR, 14 PAIRS SPHERICALS, 9 PAIRS CYLINDERS, CONTENTS "G." See Page 234 |
| 2096 | Black seal grain leather covered, velvet lined case, as illustrated. Lenses, 36 mm. in 1801 Alumnico test rings. |
| 2095 | Same as No. 2096, except 1803 Alumnico test rings. Lenses, 32 mm. |
| | No. 3008 prism bar furnished with above sets when so ordered. |
| | DESCRIPTION. POCKET JUNIOR, 6 PAIRS SPHERICALS, 6 PAIRS CYLINDERS, CONTENTS "I." See Page 235 |
| 2091 | Black seal grain leather case, with leather lining and pockets. Focus numbers stamped in gold. Style of illustration with trial frame in same case. Lenses, 36 mm. in 1801 Alumnico test rings. |
| 2093 | Same as No. 2091, except 1803 Alumnico test rings. Lenses, 32 mm. |
| | DESCRIPTION. PRISM SET, CONTENTS "K." See Page 235 |
| 2098 | Black seal grain leather covered, velvet lined case. Furnished with 36 mm. round prisms in 1801 rings. |
| 2099 | Same as No. 2098 except square prisms. |
| 3007 | Three power confirmation test. Set of two combinations $+.25\text{ D.} +.50\text{ D.} +.75\text{ D.}$ sphericals; $-.25\text{ D.} -.50\text{ D.} -.75\text{ D.}$ sphericals. Lenses, 36 mm. |
| 3008 | Prism bar. Nickered frame. Powers: $.50\Delta$, 1Δ , 1.50Δ , 2Δ , 2.50Δ , 3Δ , 4Δ , 5Δ , 6Δ , 8Δ . Base toward handle or side as ordered. Latter arrangement if not otherwise specified. |



NEUTRALIZING AND RETINOSCOPIC SETS

NUMBER

DESCRIPTION

- 3001** Neutralizing set in oak tray on bracket.
CONTENTS: 30 powers each convex and concave sphericals to 10.00 D. Lenses, 36 mm. in 1801 trial rings, as follows: 0.12, 0.25, 0.37, 0.50, 0.62, 0.75, 0.87, 1.00, 1.12, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 3.75, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 8.00, 9.00, 10.00.
- 3021** Neutralizing set in oak tray.
CONTENTS: 35 powers each convex and concave sphericals, 21 powers each convex and concave cylinders. Same numbers as sphericals in contents "C," page 233. Lenses, 36 mm. in 1801 trial rings.
- 3041** Neutralizing set in oak tray same as No. 3021 except contents.
CONTENTS: 40 powers each convex and concave sphericals, 24 powers each convex and concave cylinders. Same numbers as in contents "E," page 234. Lenses, 36 mm. in 1801 trial rings.
- 3051** Retinoscopic set in leather covered, velvet lined case.
CONTENTS: 28 powers each convex and concave sphericals to 8.00 D. No. 2260, double cell trial frame. Lenses, 36 mm. in No. 1801 trial rings, as follows: 0.25, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 3.75, 4.00, 4.25, 4.50, 4.75, 5.00, 5.25, 5.50, 5.75, 6.00, 6.50, 7.00, 7.50, 8.00.
- 3061** Neutralizing set in oak tray, same as 3001 except without bracket. Lenses are frosted except 13 mm. opening in center.
CONTENTS: 30 powers each convex and concave sphericals to 8.00 D. Lenses in 1801 trial rings, same numbers as contents "E" to 8.00 D. See page 234.



SPECIAL TRIAL SETS

The above illustration shows a special trial set in cabinet form made to order, and will indicate, when considered in connection with the variety shown on previous pages, our facilities for furnishing any special styles of trial sets made up to suit the needs or fancy of the oculist or optometrist.

ROLL FRONT AND REGULAR FRAME STOCK CABINET

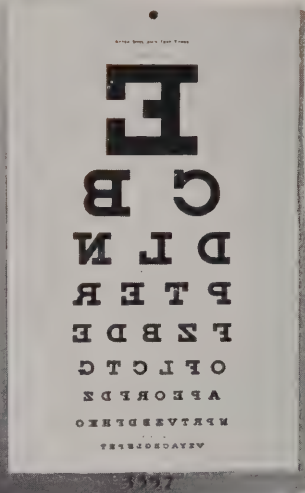
We are prepared to quote upon and furnish any style of stock cabinet.



FITTING SETS AND CASES

NUMBER	DESCRIPTION
3000	Set of Eyeglasses for fitting in leather covered case. Containing one dozen assorted 1 eye eyeglasses with reference numbers 1 to 12 etched on the lenses.
3010	Set of Spectacles for fitting in leather covered case. Containing one dozen No. 2207 1 eye fitting frames complete with accurate "SS" bridges. Lenses etched with cross lines and numbered dimensions.
3012	Folio for spectacle fitting frames, leather covered. Holds one dozen riding frames.
3012 WITH RIM.	Case for twelve spectacle fitting frames or mountings, leather covered, one-half inch high inside.
3018	Same as No. 3012, except larger, holds eighteen spectacle fitting frames or mountings.
3020	Carrying case only, to contain tray of trial lenses such as furnished with office sets having contents "A," "B," "C" or "D." See pages 233 and 234. Made in black seal grain or tan leather. Black unless otherwise ordered.

NOTE.—Special Sets of Spectacles or Eyeglasses furnished in any desired assortment.

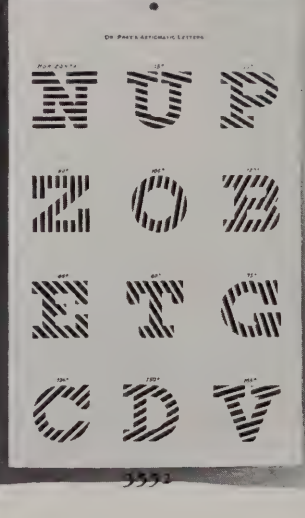
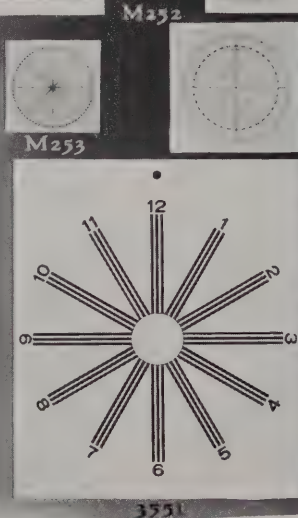


3556 G

3555

3555 G

3556



TEST TYPES, ETC.

NUMBER	DESCRIPTION	NUMBER	DESCRIPTION
3550	Distance test types, size 12 x 18 inches.	3550	Reading test types, size 4 1/8 x 6 5/8 inches.
3551	Clock dial astigmatic chart, size 12 x 13 inches.	3556 G	German reading test types, size 4 1/8 x 6 5/8 inches.
3552	Dr. Pray's astigmatic letters, size 12 x 18 inches.	3557	Distance test types, reversed, for use with mirror, size 12 x 18 inches.
3553	German distance test types, size 12 x 18 inches.	M 252	Protractor, engraved, 5 inches, square.
3554	Illiterate chart, size 12 x 21 inches.	M 253	Protractor, printed, 3 1/2 inches, square.
3555	Reading test types, size 5 1/8 x 8 inches.	M 254	Protractor, printed, 10 1/2 inches, square.
3555 G	German reading test types, size 5 1/8 x 8 inches.		

If above test types are desired with one fold, add 1/2 to catalogue number, as 3550 1/2.

Nos. 3555 and 3555 G may be supplied with two folds, add 3/4 to catalogue number.

Folding test types are made with substantial cloth hinges.

For Prentice Prismometric Chart, see illustration, page 205.



READING TEST TYPE HOLDERS

NUMBER	DESCRIPTION
3562	Leather covered, water grain, solid back.
3563	Leather covered, seal grain, double folio, padded covers, English and German.
3563 1/2	Leather covered, seal grain, double folio, plain covers, English and German.
3565	Oak or mahogany, skeleton frame with handle.
3565 1/2	Oak or mahogany, skeleton frame without handle.
3566	Oak or mahogany, solid back with handle.
3566 1/2	Oak or mahogany, solid back without handle.

Test cards are supplied with all above holders. Extra cards for same carried in stock, see preceding page.
Specify oak or mahogany in ordering wood holders.

TRIAL RINGS, TRIAL FRAMES AND ACCESSORIES

THE American Optical Company line of Trial Frames, illustrated and described in the following pages, is the largest and most complete line of these goods on the market. It comprises also the frames which are acknowledged the best and most convenient for the oculists' and optometrists' use. Many of the frames are protected by Letters Patent. They are made by skilled workmen, and the greatest care is exercised to have them accurate in their graduations and perfect in operation.

The line of trial rings furnished with our trial sets and shown on page 263 includes the various styles now most popular.

No. 1801 style rings are made of alumnico white non-tarnishable metal, and possess the advantage of light yet strong and neat construction and the ready interchange of lenses. Alumnico rings are always furnished nickel-plated unless otherwise ordered.

No. 1801 rings may be supplied gold-plated for concave lenses, if so ordered, and at an extra charge.

No. 1806 Nachet rings are furnished nickel-plated for convex lenses, prisms, and disks, and in gilt for concave.

Nos. 1801, 1802, 1806 and 1812 rings may be had with black oxidized finish, and focus numbers stamped in white, if so desired, at an extra charge.

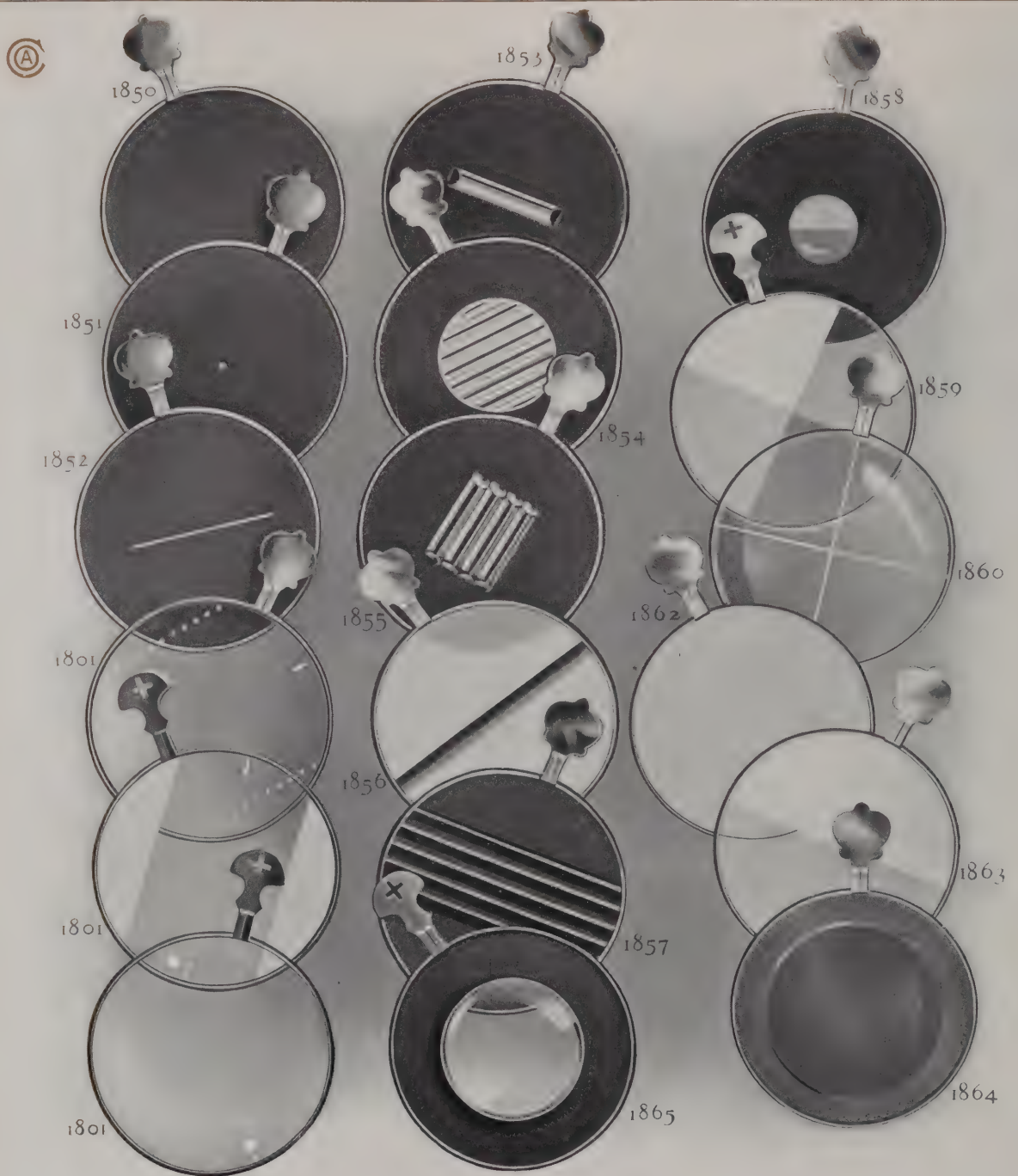
No. 1821 gold-filled rings are supplied only when specially ordered.



TRIAL RINGS

- No. 1800 Rings, Nachet style, 38 mm. outside diameter. Solid oblong handle
 No. 1801 Rings, Alumnico, 38 mm. outside diameter; No. 1803 Rings, same except 33 mm. outside diameter
 No. 1806 Rings, Nachet style, 38 mm. outside diameter; No. 1804 Rings, same except 33 mm. outside diameter
 No. 1821 Rings, gold filled, 38 mm. outside diameter; No. 1823 Rings, same except 33 mm. outside diameter
 No. 1802 Rings, extra fine gilt and white, 38 mm. outside diameter
 No. 1812 Rings, extra fine gilt and white, 38 mm. outside diameter

NOTE.—No. 1800 rings may be also furnished 33 mm. outside diameter. No. 1812 rings without handles have milled edge.

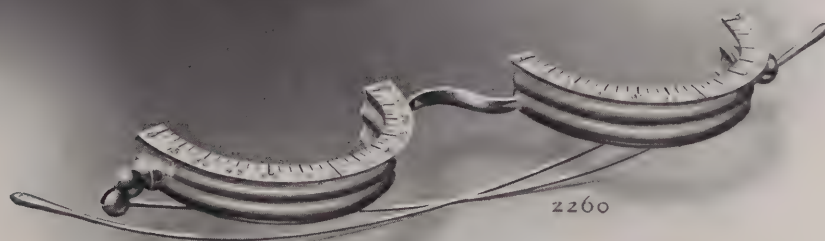
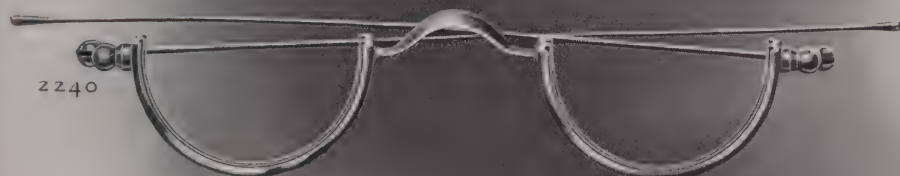
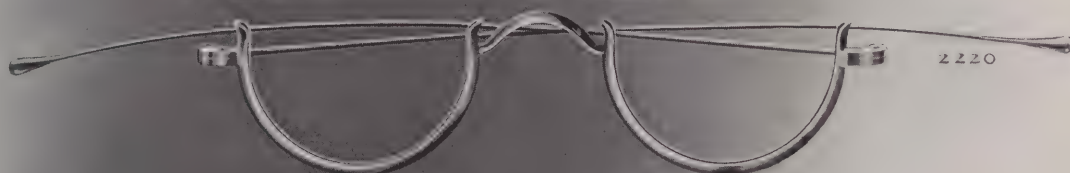


DISKS

No. 1850	Blank disk	No. 1853	Maddox rod, white or red	No. 1858	Maddox prism
No. 1851	Pinhole disk	No. 1854	Maddox multiple rod, circular, white or red	No. 1859	Cone prism
No. 1852	Stenopeic disk	No. 1855	Maddox multiple rod, quadruple, white or red	No. 1860	Cross line disk
No. 1861	Plano convex cylinder, dotted	No. 1856	Maddox groove, white or red	No. 1862	Frosted disk
No. 1861	Plano convex cylinder, frosted	No. 1857	Maddox multiple groove, white or red	No. 1863	Half frosted disk
No. 1861	Plano convex cylinder, Stev- enson's axis marking	No. 1865	Diaphragm disk, for very strong convex or concave trial lenses	No. 1864	Chromatic test

In trial sets disks are mounted in the same style of rings as the lenses. When ordered separately they are furnished in No. 1801 rings, as illustrated above, unless otherwise ordered.

Cylinders in trial sets are always frosted similar to above illustration (1801, upper), unless otherwise ordered.



TRIAL FRAMES

38 MM. 33 MM.
NUMBER NUMBER

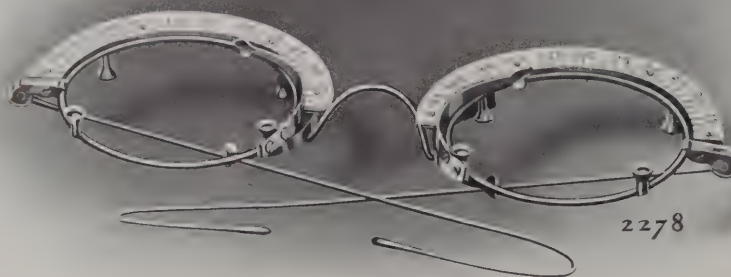
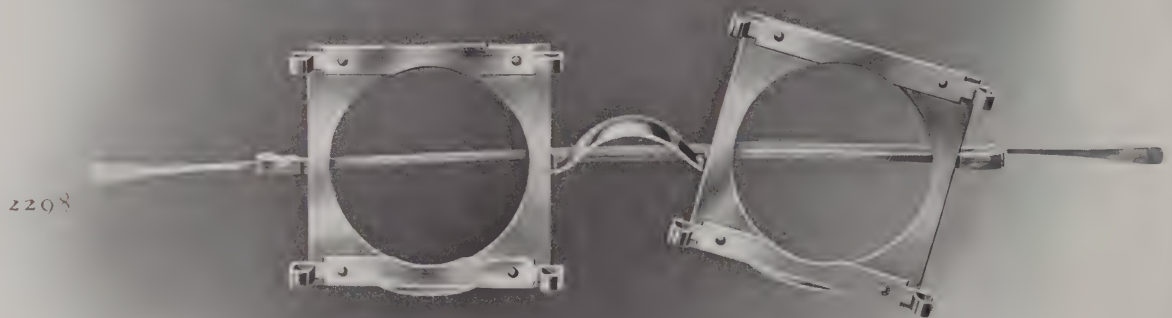
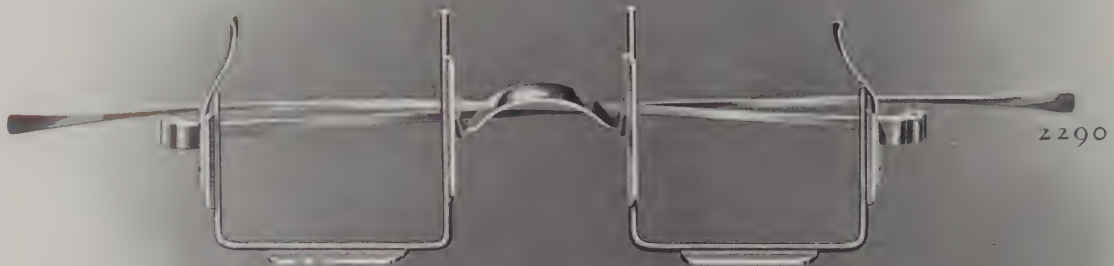
38 MM. 33 MM.
NUMBER NUMBER

2210	2213	Round eye with hooks for two lenses	2248	2249	Same as No. 2240, except three cell
2220	2223	Single cell, straight temple	2250	2253	Same as No. 2240, except with spring
2230	2233	Same as No. 2220, except with spring	2260	2263	Double cell with metal scale
2240	2243	Double cell, straight temple	2268	2260	Same as No. 2260, except three cell

TRIAL FRAMES FOR INTERCHANGEABLE LENSES

No. 2220-1 1 eye, single cell, straight temple
No. 2220-0 0 eye, single cell, straight temple

No. 2240-1 1 eye, double cell, straight temple
No. 2240-0 0 eye, double cell, straight temple



TRIAL FRAMES

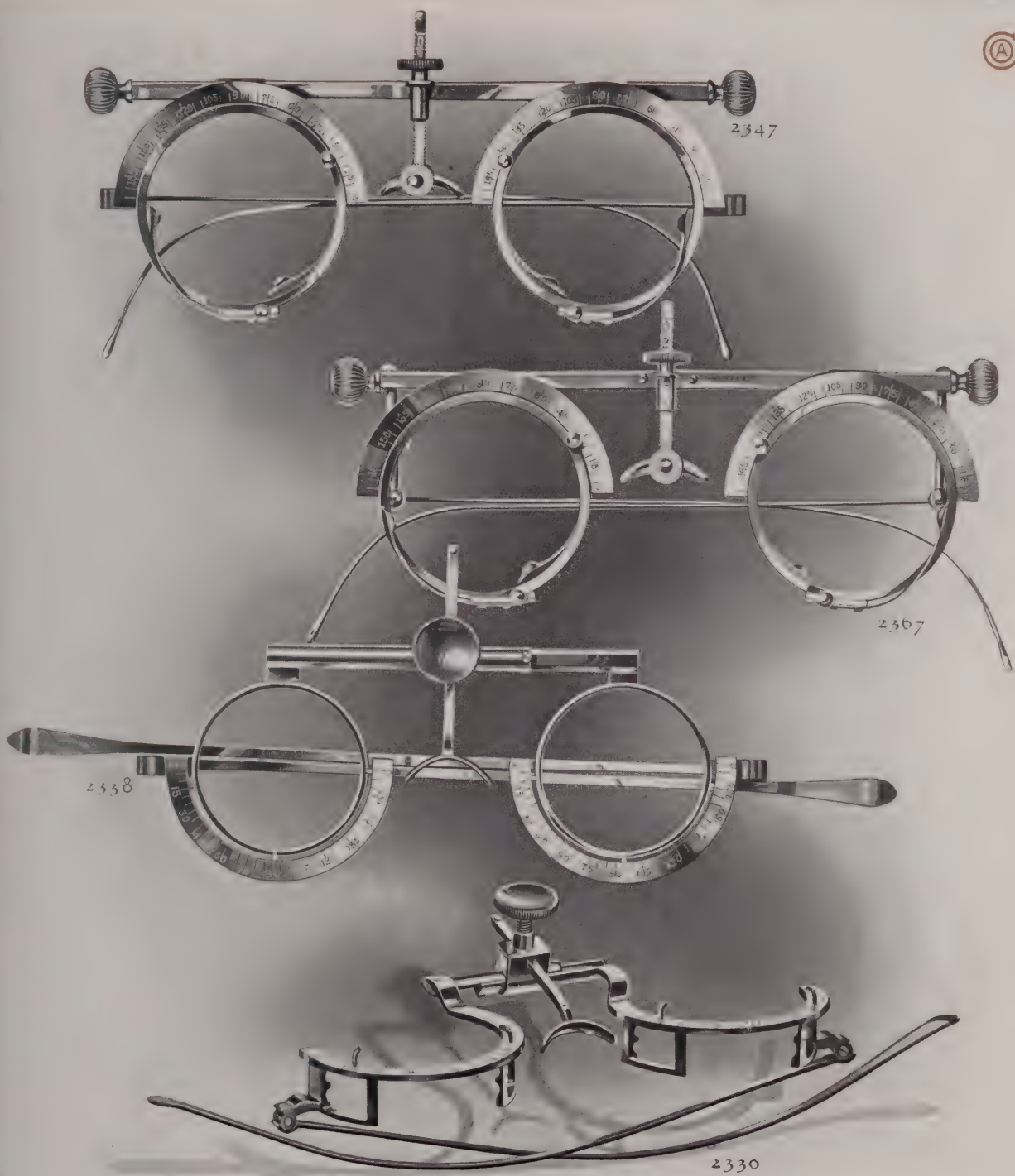
33 MM.
NUMBER

33 MM.
NUMBER

2280
2281
2282
2283

2283
2284
2285
2286

Square prism frame, straight temples
Square prism frame, straight temples
Square prism frame, straight temples, revolving cells
Double cell riding temple, celluloid scale, assorted saddle bridges



TRIAL FRAMES

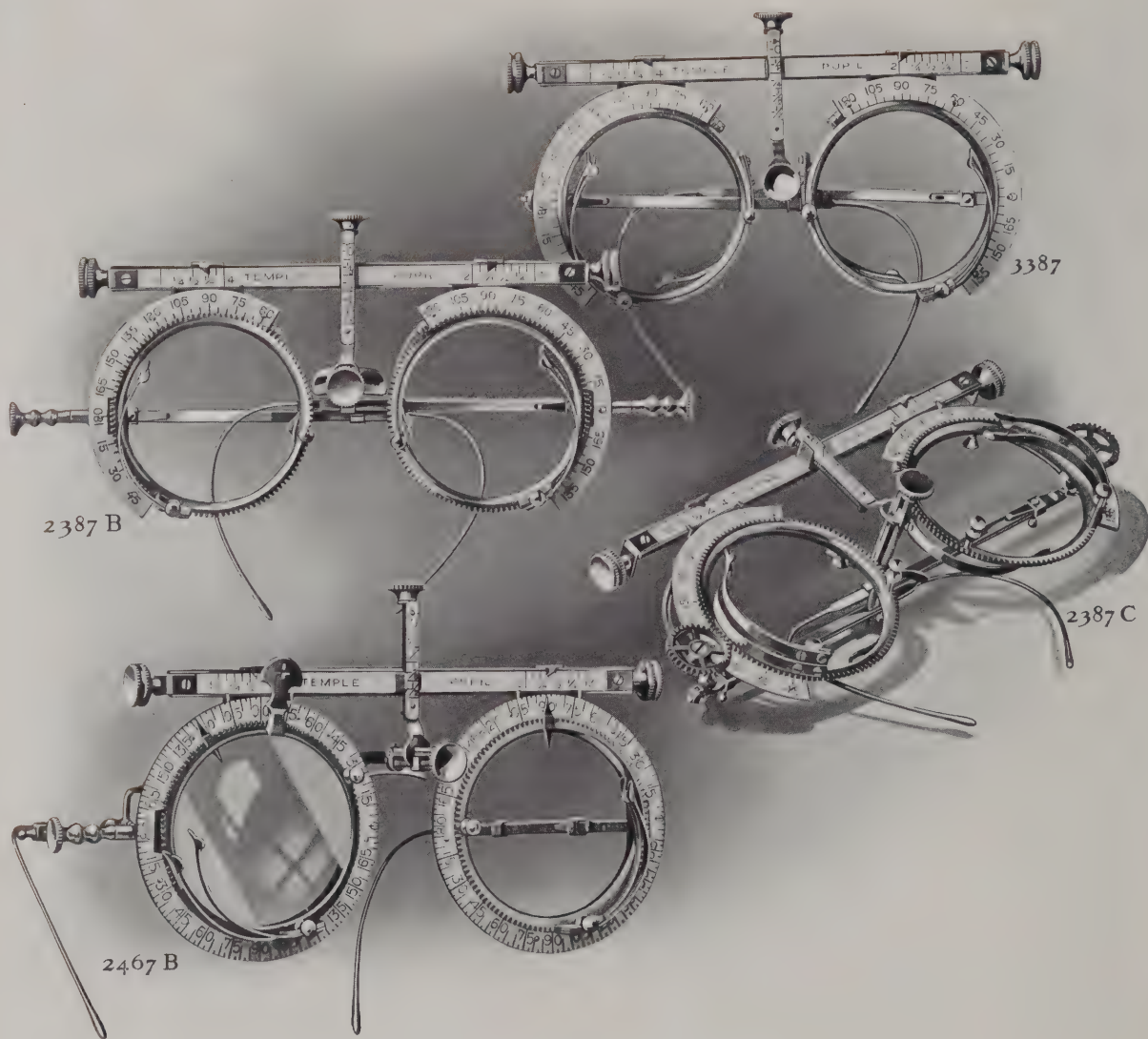
U. S. PAT. NO.
NUMBER

U. S. PAT. NO.
NUMBER

2347
2367
2338
2330

2348
2349
2350
2351

Patented double cell, metal scale, half-riding temples
Patented double cell, metal scale, half-riding temples
Three cells, metal scale, straight temples
Three cells, metal scale, straight temples



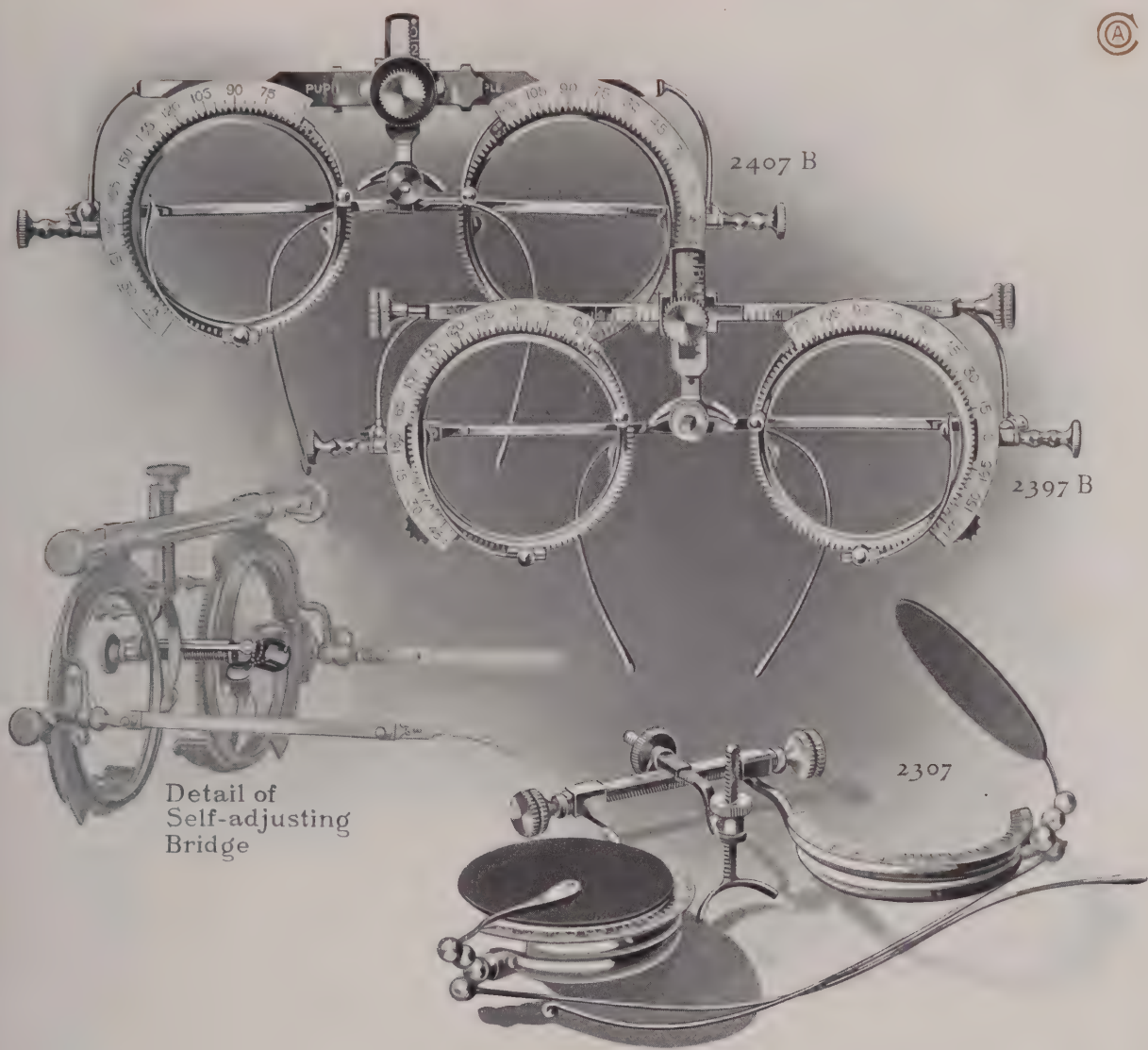
TRIAL FRAMES

38 MM.
NUMBER

33 MM.
NUMBER

2387	2383	-	Patented double cell, Wells extension temples, celluloid scales on eyes and bar
2387 B	2383 B	-	Patented, same as No. 2387, except patent revolving cell and thumb screw
2387 C	2383 C	-	Patented, same as No. 2387, except patent revolving cell and thumb wheel
2467 B	-	-	Patented, same as No. 2387 B, except Rhoad's full circle scale and double axis pointer

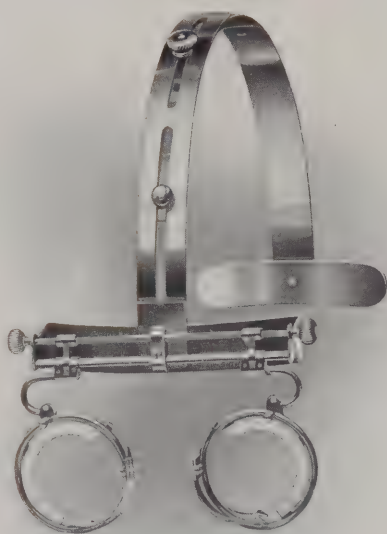
- NOTE.—1. Above trial frames made with Wells patent temples unless otherwise ordered.
2. Above trial frames made with three cells if desired, subject to an extra charge.
3. All patent revolving cell trial frames may be had with lock as shown on frame 2397 B, page 269, if so desired, at a slight additional charge. Specify "with lock."
4. Above trial frames can be made with D attachment for independent pupillary adjustment when so ordered, subject to a slight extra charge.
5. Self-adjusting Bridge, shown on following page, is regularly supplied on above trial frames without extra charge.



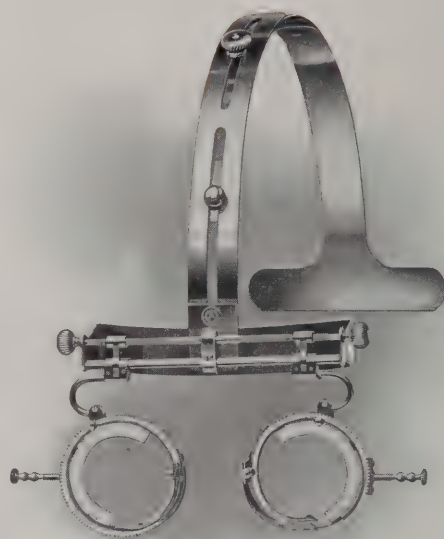
TRIAL FRAMES

38 MM. NUMBER		33 MM. NUMBER		
2407	-	2403	-	Patented three cell, Wells extension temples, angular celluloid scales on eyes
2407 B	-	2403 B	-	Patented, same as No. 2407, except patent revolving cell and thumb screw
2407 C	-	2403 C	-	Patented, same as No. 2407, except patent revolving cell and thumb wheel (See illustration 2387 C, page 268)
2397	-	2393	-	Patented three cell, Wells extension temples, angular celluloid scales on eyes
2397 B	-	2393 B	-	Patented, same as No. 2397, except patent revolving cell and thumb screw Without lock, unless so ordered
2397 C	-	2393 C	-	Patented, same as No. 2397, except patent revolving cell and thumb wheel (See illustration 2387 C, page 268)
2307	-	2303	-	Patented, drop eye, double cell, metal scale style of illustration, but without hinged shutter, unless so ordered
2308	-	2309	-	Patented, same as No. 2307, except three cells

- NOTE.—1. Above trial frames made with Wells patent temples unless otherwise ordered.
2. Above trial frames that are regularly supplied with three cells may be had with double cells when so ordered.
3. All patent revolving cell trial frames may be had with lock, as shown in above illustration, if so ordered, at a slight additional charge. Specify "with lock."
4. Self-adjusting Bridge, as shown above, is regularly supplied on all revolving cell trial frames without extra charge.



Illustrating No. 2457. "California" Patented Trial Frame complete, for 36 mm. Trial Lenses



Illustrating No. 2457B. "California" Patented Trial Frame complete, for 36 mm. Trial Lenses fitted with Patent Thumb Screw Attachment for revolving the Lenses

"CALIFORNIA" TRIAL FRAME.—PATENTED

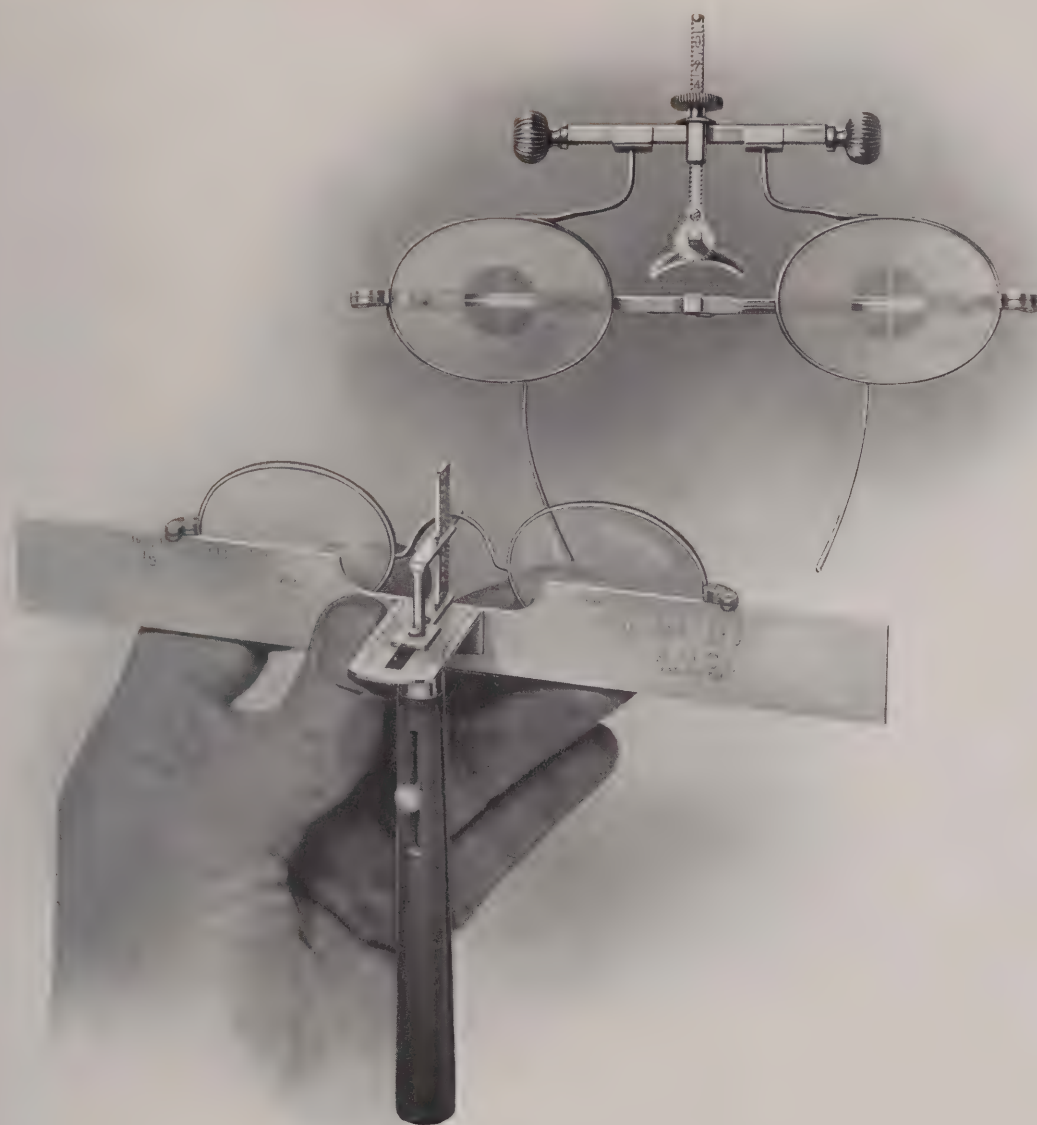
The "California" trial frame represents a distinct modification from ordinary trial frames—not only in its means of support, consisting of a specially constructed adjustable and folding head-band, but in the means of adjustment and use, and details of construction.

Accuracy of Adjustment A strong feature—the accurate setting of trial lenses to any desired position, namely: With deep set eyes lenses can be set in close; with protruding eyes or long eyelashes lenses can be set accordingly. The reading angle is obtained by tilting lens cells forward. In short, the test is made with trial lenses set in the same position as glasses will be worn when finished.

Adjustment to Compare Correction with Naked Eye An adjustment to raise both lens cells, or one cell only, allows a comparison of lens correction and the patient's own eyes without removing frame.

Improved Axis Scale The axis scale is placed inside of lens cell, so that axis mark of cylinder lies directly over scale, making the reading of the axis exact.

Simple Construction The "California" trial frame is simple in construction, there being no complicated parts or unnecessary adjustments. The adjustments are direct and easily and quickly manipulated. It can be taken apart, folded up in a moment into very compact form, and can be put together for use just as readily.



MEASURING FRAME

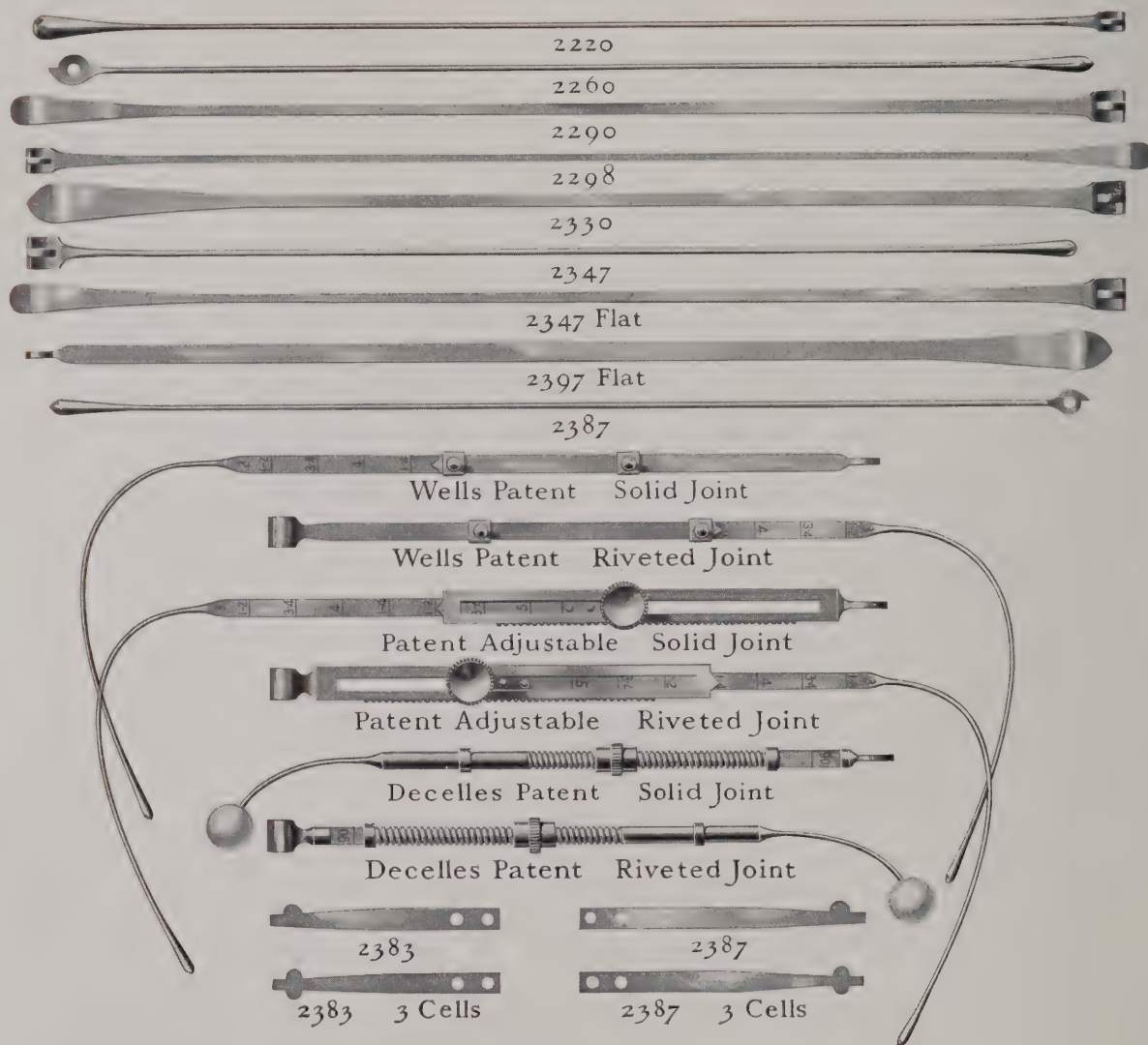
No. 2206. Patented, oval eye with cross-lines. Wells extension temples.

NOTE.—The pupillary distance, height of bridge and the temple width are all accurately measured by means of this frame. It is made with adjustable riding temples, which indicate the length of temple required in each case. It will be found a useful addition to the equipment of a prescription optician.

FRAME MEASURE

No. 2216. Steel scale with inch and millimeter graduations, complete with full directions for use.

NOTE.—This instrument will measure spectacle frames both quickly and accurately. The height, inclination and base of bridge, pupillary distance, etc., are indicated in both inches and millimeters. It also shows the distance between temples and their length as well. It is a practical instrument in every respect.



TRIAL FRAME, TEMPLES AND SPRINGS, NICKEL-PLATED

Wells patent or patent adjustable temples supplied with ball tips (shown on Decelles temple) if so ordered.

In ordering temples only, give catalogue number as above.

If any special style of temple illustrated above is desired on a trial frame regularly made otherwise, give catalogue number of frame and number of temple as above.

SPECTACLE EYEGLASS GOGGLE
AND OTHER CASES





View in Department where Paper Form Cases are covered

SPECTACLE, EYEGLASS, GOGGLE AND OTHER CASES

TOO much importance cannot be attached to the character of the spectacle case as a container of the goods representing the professional skill and dignity of the oculist or optometrist and carrying his only direct advertisement. Unless of the highest character in every respect the case is unquestionably detrimental to the reputation of the man whose prescription work it contains and whose imprint it bears.

The establishment of our Case Department in 1897 was the direct outcome of an appeal by the optical trade for uniformity, quality and systematic standards of production in spectacle and eyeglass case manufacture.


Prior to taking up this important branch of optical industry no creditable effort had been made on the part of the small manufacturers who were producing these goods to develop or improve their lines to any extent. Little or no attempt was made to adopt mechanical methods by which these desirable ends might have been attained.

In sixteen years of effort, AOCo methods have brought about an entire reformation in case making. Modern machinery supplemented by expert inspection and supervision have replaced the crude, slow hand



Lining Inspection of AOCo Patented Self-closing Cases


methods. Intelligent selection of the best materials and the application of patented structural features to the goods themselves have, as a net result, developed a product unapproached in character, serviceability and mechanical excellence.

Every genuine AOC_o case is stamped inconspicuously with this mark , a positive guarantee of case excellence signifying product of sterling character substantially and honestly built.

The AOC_o product reflects credit upon the oculist or optometrist who adopts this line for his work, and it sustains the AOC_o claim for leadership in the spectacle and eyeglass case industry.

Patented, Self-closing Styles We long since realized that the self-closing types of metal form cases would gradually replace to a great extent the paper form open-end goods. In support of this belief we have maintained an entire mechanical department devoted exclusively to the development of ideas and improvements not only in the construction of the goods themselves but in the machinery and methods for their manufacture. We have succeeded in making many important improvements in self-closing styles of cases which, being protected by patents, give the AOC_o line exclusive advantages over the ordinary types offered. These refinements include a more substantial and compact spring mechanism — a rigid hinge giving a positive action.

In machinery and methods we have developed automatic covering and lining devices which produce a perfectly smooth, uniform appearance and a distinctive character which is a notable feature of the AOC_o line. Such improved methods of covering and lining preserve the original grain and general finish of leather which is an exclusive AOC_o feature. These improvements, coupled with the employment of expert operatives and the use of only the rust-proof metal and best grades of covering materials, make possible a product far in advance of the nameless goods often made of the cheapest materials by unskilled operatives employing out-of-date hand methods.

The patented self-closing styles of AOC_o cases are well shown in the group cuts. (See pages 279, 280, 281 and 282.) In ordering from your wholesaler specify AOC_o make and look for the trade mark  on each case.

Polished Aluminum Cases The AOC_o line of polished aluminum (PA) cases, introduced within the past few years, has been received with marked favor and is one of our most important specialties. The lightness of the metal itself combined with its attractive finish and color appeals at once to the discriminating tastes of the best class of patronage. Polished aluminum cases are made in the button cover form and in all of the popular self-closing styles.

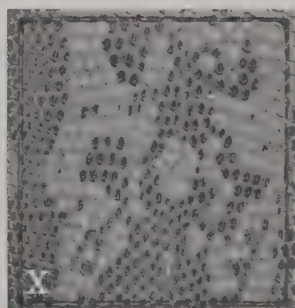
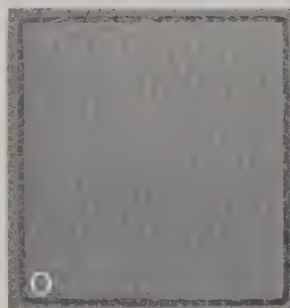
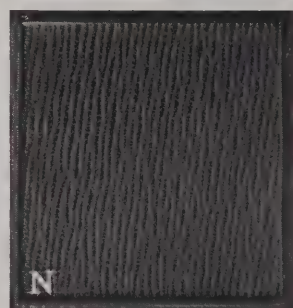
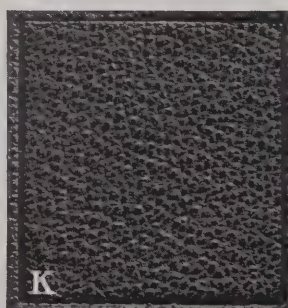
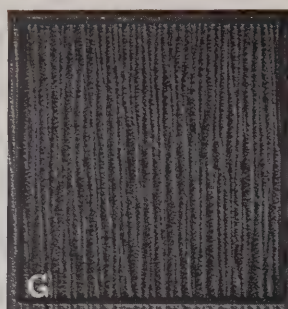
The PA¹ and PA² designs, shown on page 282, are very attractive, and are considered good sellers. New designs are to be added from time to time. The "oxidized" styles, which can be furnished with back-

ground in colors — red, green and blue — as well as black, make a handsome addition to the line, especially for holiday trade.



Patented Self-closing Case with Gold Stripe on Cover

Japtol Cases Japtol (trade mark, registered) is a special preparation which we use for coating uncovered metal cases. The process of applying this material imparts a hard-rubber finish, making a very desirable low-priced line of metal form goods.



AOCO CASE COVERING MATERIALS
For description, see opposite page

AOCO CASE COVERING MATERIALS AND FINISHES

A Skiver, black	J Water Grain, black	MS Vicar Silk, black	S 1 Silk, red
A 1 Skiver, red	J 1 Water Grain, red	MS 1 Vicar Silk, red	S 3 Silk, green
A 3 Skiver, green	J 2 Water Grain, green	MS 3 Vicar Silk, green	S 7 Silk, gray
A 4 Skiver, blue	J 4 Water Grain, blue	MU 3 Vicar, Alligator Grain, green	U 3 Genuine Alligator, green
C Chamois, natural	K Genuine Morocco, black	MU 6 Vicar, Alligator Grain, brown	U 6 Genuine Alligator, brown
C 1 Chamois, red	K 1 Genuine Morocco, red	MU 7 Vicar, Alligator Grain, gray	V French Calf, black
C 2 Chamois, wine	K 2 Genuine Morocco, wine	N Long Grain Morocco, black	V 1 French Calf, red
C 3 Chamois, green	K 3 Genuine Morocco, green	N 1 Long Grain Morocco, red	V 2 French Calf, wine
C 4 Chamois, blue	K 4 Genuine Morocco, blue	N 2 Long Grain Morocco, wine	V 3 French Calf, green
C 5 Chamois, white	K 6 Genuine Morocco, brown	N 3 Long Grain Morocco, green	V 4 French Calf, blue
C 6 Chamois, brown	L Leatherette, black	O Genuine Pigskin	V 6 French Calf, brown
C 7 Chamois, gray	M Vicar, Water Grain, black	P Paper, black	X Genuine Lizard, black
P Levant Grain, black	M 2 Vicar, Water Grain, wine	R Extra Quality Morocco Grain, black	X 3 Genuine Lizard, green
G Long Grain, black	M 3 Vicar, Water Grain, green		X 6 Genuine Lizard, brown
G 1 Long Grain, red	MK Vicar, Morocco Grain, black		X 7 Genuine Lizard, gray
G 3 Long Grain, green	MK Vicar, Morocco Grain, wine		Y 1 Genuine Russia Calf, red
G 4 Long Grain, blue	MK 3 Vicar, Morocco Grain, green		Y 3 Genuine Russia Calf, green
H Morocco Grain, black			Z Genuine Seal, black
I Seal Grain, black			JAP Japtol Finish
			PA Polished Aluminum

AOCO Leathers and Other Covering Materials The accompanying illustration conveys an idea of the covering materials that are employed for AOCO spectacle and eyeglass cases. It will be noted from the list that many of the different kinds can be supplied in several colors. Black water grain (J) leather is most largely employed and AOCO cases covered with this material are regularly carried in the stocks of representative wholesalers.

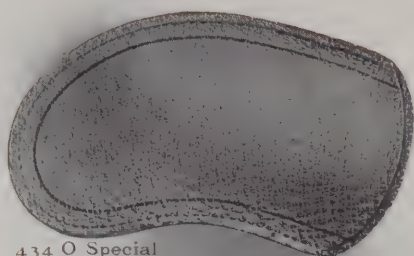
Vicar (trade mark, registered), is a special covering material made in close imitation of leather and silk. It will outwear leather and has rapidly gained favor where serviceability at low cost is particularly desired.

In Ordering Cases always give catalogue number which indicates the form of case wanted and add the letter which carries the covering material. If ornaments are desired add also catalogue number of ornament, viz.: 327 J 3 / 24 signifies self-closing style case for RB spectacles covered with red water grain buffing to which is to be applied silver-plated center ornament No. 24. If chamois lining is required add C to catalogue number.

Linings Particular attention is called to the quality of linings used in AOCO spectacle and eyeglass cases. In all the regular and patented self-closing styles an excellent grade of velveteen is employed in colors to match the covering materials, which more than compares favorably with other makes. The colors are richer and less likely to fade. In our better grades of PA cases a fine quality of silk velvet is used; while in the Vicar covered and regular PA styles a ribbed or corduroy velvet gives an attractive appearance. Chamois linings (C) can be furnished if ordered in natural or other colors. There is a great difference in the quality in chamois on the market, and a careful comparison of material should be made first, before considering competitive prices.

Goggle Cases The AOCO line of goggle cases, shown on page 285, is intended to include all styles necessary for containing the entire line of AOCO automobile goggles. These cases are of the same workmanship and materials which characterize the regular AOCO spectacle and eyeglass cases.

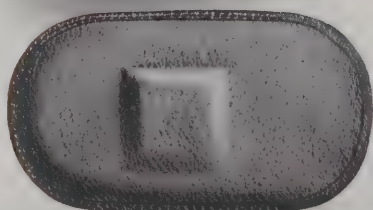
Cases with Screw Drivers The accompanying illustration, page 278, shows a desirable feature which may be had with any forms of AOCO patented self-closing cases. This consists of a tiny screw driver tucked under a loop in the leather disk that has been pasted in the bottom. The screw driver lies flat, and does not interfere with the glasses. It is intended to be used for tightening glass screws.



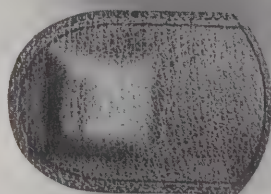
434 O Special



434 OB Special



437 OB Special



407 OB Special

"Varsity" Eyeglass Cases. See page 284

in New York, Chicago, San Francisco, and London, particularly those styles in most general demand. Each office has facilities for lettering cases so that wholesalers may be supplied upon short notice. A list of cases carried in AOCo stock will be supplied free upon request.

Shipping Instructions It is our custom to ship all goods by express, unless otherwise ordered, therefore, when desirable that spectacle and eyeglass cases be shipped by freight, the order should so state, giving choice of route, if any.

Special Cases On page 286 we show a few styles of cases manufactured by us for special purposes. Our extensive equipment and resources enable us to undertake any such work of a special nature and we are always willing to estimate for customers on cases for any purpose whatever.

All Orders should be written plainly and the quantity expressed in dozens. If two gross of cases are desired, the order should call for 24 dozen.

Lettering If cases are desired lettered with name in gold leaf or gilt leaf, the order should be very explicit, and, if possible, a business card should accompany the order to avoid mistake in spelling. When this is not practical, the instructions for lettering should be printed (not written in script) as neatly as possible. Designs larger than $\frac{7}{8}$ " x $1\frac{1}{2}$ " are subject to an extra charge. We recommend the use of brass dies for lettering, and are prepared to supply them at a reasonable cost.

It is possible to letter the finger-piece style cases Nos. 705, 715, 706, 716 and 325 on their covers, thus bringing the business card more forcibly to the attention of the user. To a limited extent, all self-closing cases may be lettered along the lip. This makes a dignified advertisement. A gold stripe may be printed on cover as shown on page 275.

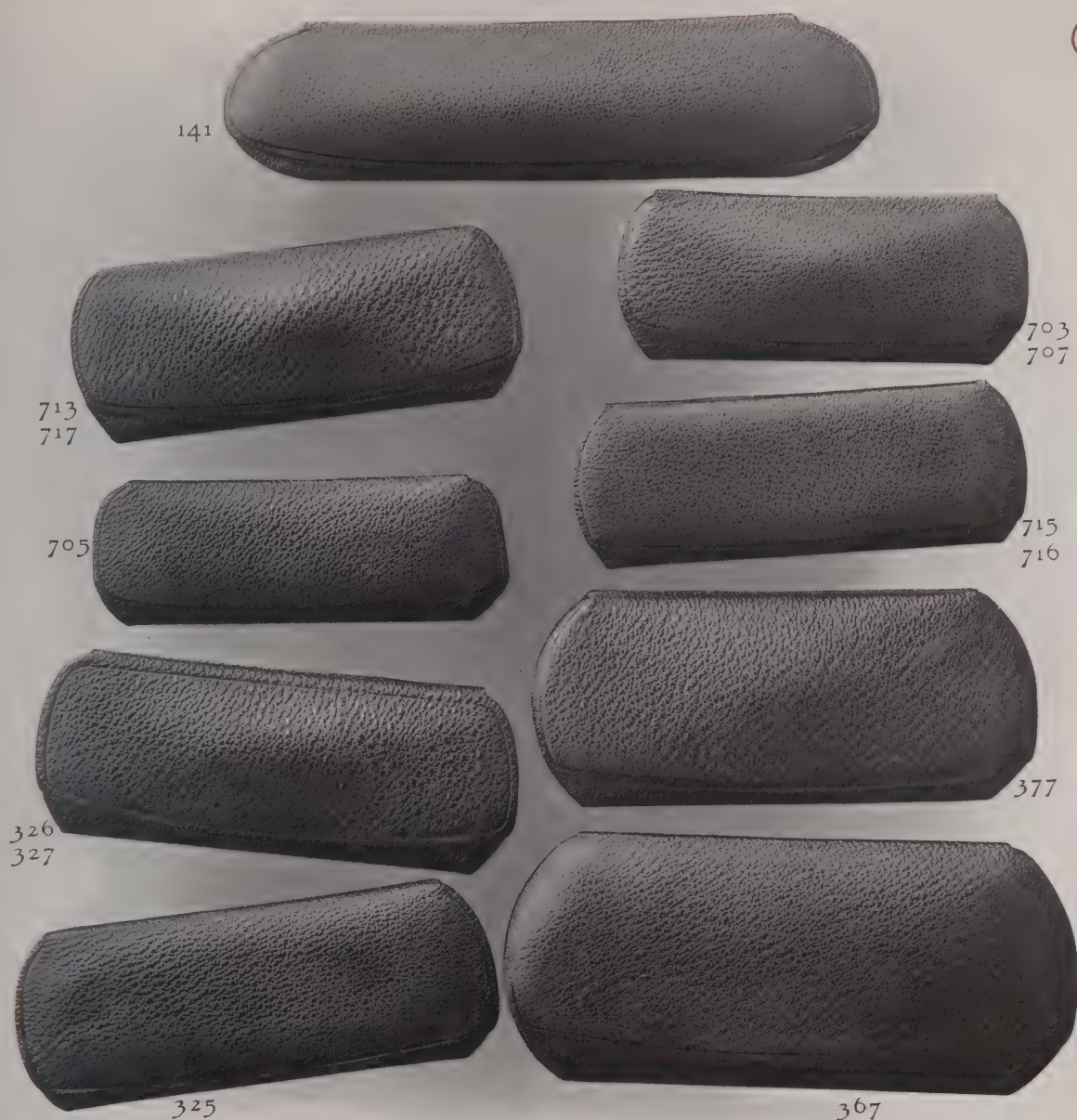
As it is not practicable to letter the metal on PA cases, we frequently letter on linings, which presents a very handsome appearance, particularly on colored chamois. Lettering on velvet linings is also an attractive feature.

Machinery for Case Lettering including brass type and all necessary supplies, illustrated and listed in Machinery Section, pages 340 and 341.

AOCo Case Stock We carry large stocks of finished cases at the factory and at our branch offices



Patented Self-closing Case with Screw Driver



SPECTACLE AND EYEGLASS CASES

Metal Form, Patented Self-closing

CATALOGUE NUMBER		DESCRIPTION		CATALOGUE NUMBER		DESCRIPTION	
Steel Form	Aluminum Form			Steel Form	Aluminum Form		
Flat	Toric			Flat	Toric		
141	-	Straight Temple		703 - 707	-	709 - 708	Eyeglass, regular
-	325	Riding Temple, flat top		713 - 717	-	719 - 718	Eyeglass, large
326	327	Riding Temple, regular	327 328	705	-	-	Finger-piece, regular
-	377	Riding Temple, large		715	-	-	Finger-piece, large
-	367	Riding Temple, extra large					

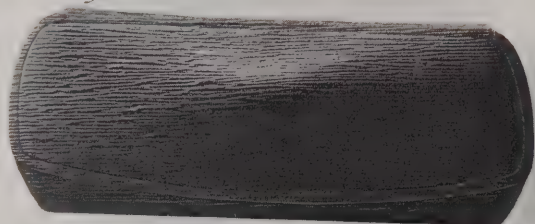
Specify covering material wanted. See page 277.

No. 367 is especially adapted for Goggles and Shooting Spectacles. See pages 189 and 190.

Nos. 705, 706, 715, 716 and 325 may be lettered on flat cover without extra charge

Ⓐ

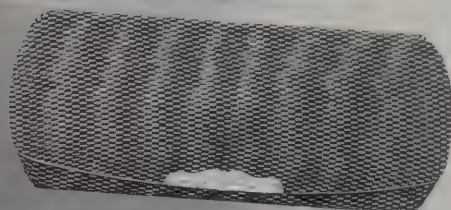
326 G



377 H



326 M-23

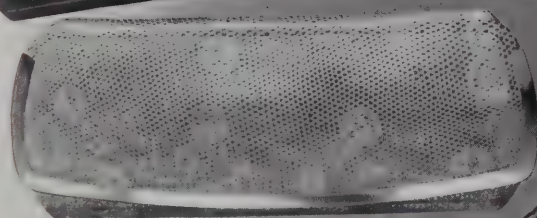


703 S7-24

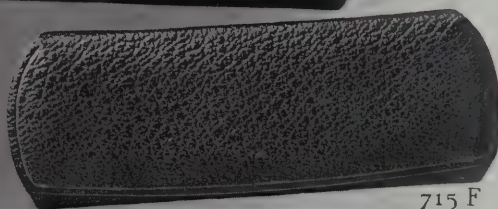
703 G
Reverse grain



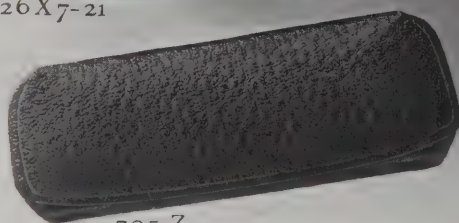
326 K
Carved



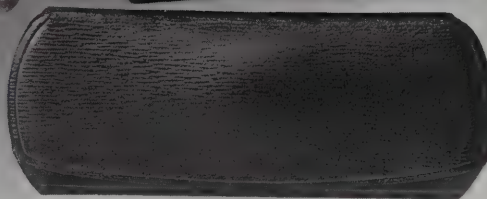
326 X7-21



715 F



705 Z



713 N

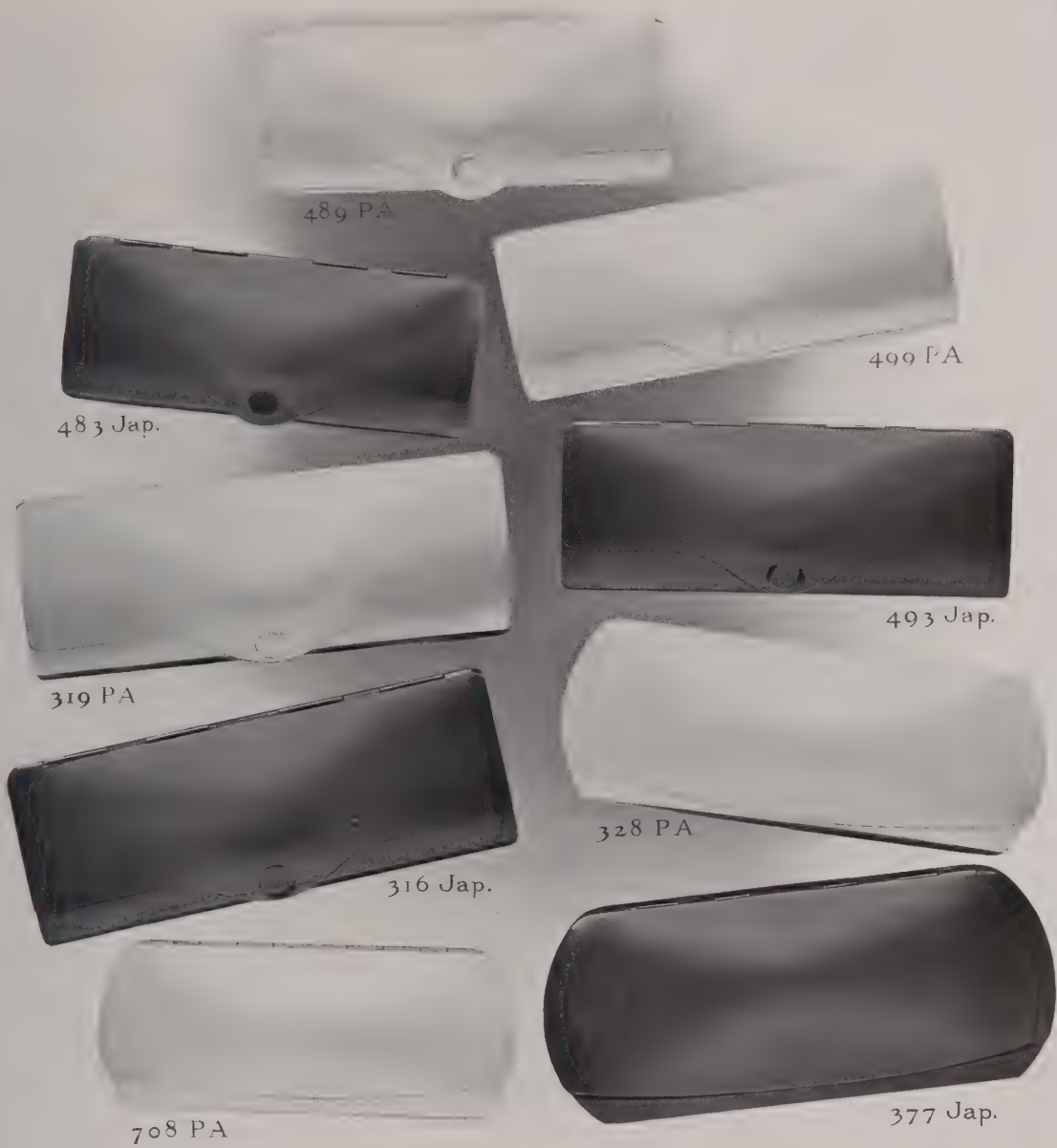
SPECTACLE AND EYEGLASS CASES

Some Features Applicable to Patented Self-closing and Other Styles

The above illustration shows some of the AOCo covering materials as they actually appear on the case forms. Particular attention is called to VICAR or imitation leather and silk materials, namely, M, MK and MS. A description of these materials is given on page 277. The carved leathers are very attractive and can be furnished on all self-closing styles in the following kinds of leather: K, K 3, K 4, V 3, V 4 and V 5. The silk coverings, S 1, S 3 and S 7 are very popular. Water proof leather is most largely used.

ORNAMENTS FOR SELF-CLOSING STYLES. Band, No. 21, Silver Plate; No. 31, Gold Plate; No. 41, Coin Silver; No. 51, 10k Gold; No. 61, 14k Gold. Corners, No. 23, Silver Plate; No. 33, Gold Plate; No. 43, Coin Silver; No. 53, 10k Gold; No. 63, 14k Gold. Center, No. 24, Silver Plate; No. 34, Gold Plate; No. 44, Coin Silver; No. 54, 10k Gold; No. 64, 14k Gold. Ornaments are supplied on standard self-closing cases in Kidney and Eye-glass, regular and large styles.

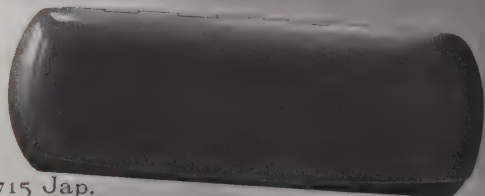
When ordering, specify the pattern or style of the ornament, and in which case right or left side must be stated. A full description of the ornament is given on page 277.



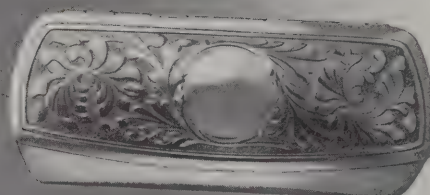
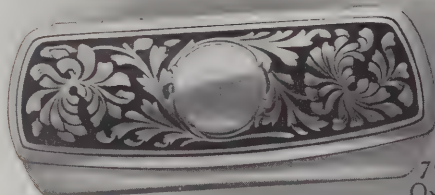
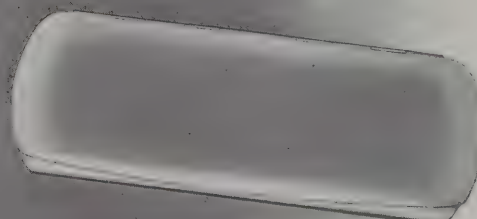
SPECTACLE AND EYEGLASS CASES
Japtol and Polished Aluminum

CATALOGUE NUMBER			DESCRIPTION			CATALOGUE NUMBER			DESCRIPTION		
Japtol	Polished Aluminum		Patented Self-closing Tori			Japtol	Polished Aluminum		Button Covers. Flat		
327 JAP	-	328 PA	-	Riding Temple, regular		306 JAP	-	311 PA	Riding Temple, regular		
377 JAP	-	-	-	Riding Temple, large			-	500 PA	Riding Temple, double		
367 JAP	-	-	-	Riding Temple, extra large		484 JAP	-	109 PA	Eyeglass, regular		
	-	708 PA	-	Eyeglass, regular		493 JAP	-	499 PA	Eyeglass, large		
715 JAP	-	716 PA	-	Finger-piece, large			-	399 PA	Riding Temple, double		

For description of Japtol finish, see page 275
For shape of No. 715 Case, see page 279; No. 399 Case, page 283; Nos. 327, 367, 377, 484, 493, 500, 582 and 583, page 284.

328 PA₁705 K
(Lettered on lip)

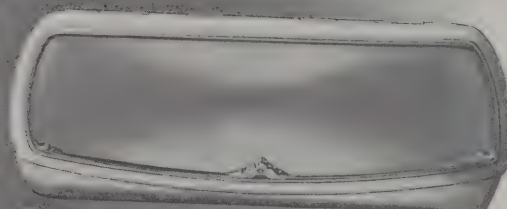
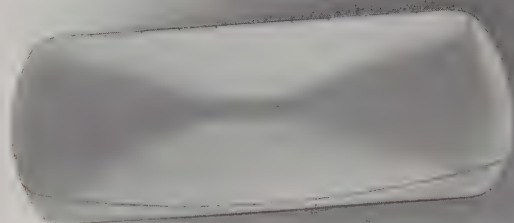
715 Jap.

708 PA₁708 PA₁
Oxidized

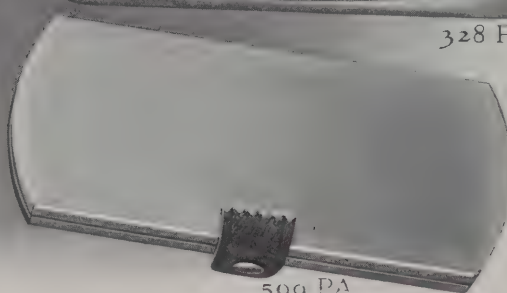
716 PA



367 Jap.

328 PA₂

328 PA



599 PA

SPECTACLE AND EYEGLASS CASES

Special Styles, Polished Aluminum, Patented Self-closing

CATALOGUE NUMBER		DESCRIPTION									
Fancy Design	Border Design										
Toric	Toric										
328 PA 1	328 PA 2	-	-	-	-	-	-	-	-	-	Riding Temple, regular
328 PA 1 Oxidized	-	-	-	-	-	-	-	-	-	-	Riding Temple, regular
708 PA 1	708 PA 2	-	-	-	-	-	-	-	-	-	Eyeglass, regular
708 PA 1 Oxidized	-	-	-	-	-	-	-	-	-	-	Eyeglass, regular

Oxidized Cases can be supplied in the following colors: Black, Green, Blue and Red; Black furnished unless otherwise ordered.
 For description of 715 JAP, 367 JAP, and 399 PA, see page 281.
 For special lettering on lip and on lining, see description, page 278.



SPECTACLE AND EYEGLASS CASES

Metal Form, with Button Covers

CATALOGUE NUMBER										DESCRIPTION
Steel Form					Aluminum Form					
Flat	Toric				Flat	Toric				
		337	-	-			-	-	-	Square Corners
316	-	-	-	-	319	-	339	-	-	- Riding Temple, regular
483	-	-	-	-	-	-	488	-	-	- Riding Temple, large
493	-	-	-	-	-	-	489	-	-	- Eyeglass, regular
										- Eyeglass, large
		497					498	-	-	Rounded Ends, Shape of Self-closing Cases
										- Eyeglass, large
										Rounded Lower Corners, Square Hinge
306	-	-	-	-	-	-	-	-	-	- Riding Temple, regular
463	-	-	-	-	-	-	-	-	-	- Eyeglass, regular
473	-	-	-	-	-	-	-	-	-	- Eyeglass, large
										Double, for Two Pairs of Glasses
396	-	-	-	-	399	-	-	-	-	- Riding Temple, regular
596	-	-	-	-	599	-	-	-	-	- Eyeglass, regular

Specify covering material wanted. See page 276.

Nos. 306, 463 and 473 are also furnished with invisible button when so ordered.

411 A

238 I

434 H

405 K

232 H

212 A

100 J

217 A

107 K

222 J

112 H

SPECTACLE AND EYEGLASS CASES
Paper Form

CATALOGUE NUMBER					DESCRIPTION	CATALOGUE NUMBER				DESCRIPTION
Straight Temple		Riding Temple				Folding Eyeglass		Adjustable Eyeglass		
mm.	38 mm. wide	41 mm. wide	45 mm. wide	51 mm. wide						
100	112	212	222	232	Open End	405	434	411	Open End	
107		217	227	238	Tuck End	407	434 Special	437	"Varsity", Open End	

The regular length for above Straight Temple Cases is 178 mm.; for Riding Temple Cases, 127 mm. Sizes given above are inside measurements.

"Varsity" styles in Eyeglass Cases in pigskin (O leather) supplied with bulge (B) on one side to accommodate offset guards when so ordered. See page 27⁸

Special material covered by material. See page 27⁸



GOGGLE CASES

Paper Form

CATALOGUE NUMBER	DESCRIPTION	CATALOGUE NUMBER	DESCRIPTION
Open End		To hold Goggle Number	
226	As illustrated - - - - 316 Folding	278	As illustrated - - - - 3026
262	As illustrated - - - - 3000	381	As illustrated - - - - 3052, 3053
272	Style of No. 278, except open end 3026	382	As illustrated - - - - 3050, 3051
Tuck End		To hold Goggle Number	
127	As illustrated - - - - 211	383	As illustrated - - - - 3060
277	Style of No. 278, except tuck end 3026	385	Style of No. 381, large - - 3398
Button End		386	Style of No. 381, extra large - 3066
268	As illustrated - - - - 3000	387	As illustrated - - - - 3068, 3030
		388	Shown on page 185 - - - 3005

Specify covering material wanted. See page 276

For styles of Goggles, see pages 183 to 190, inclusive. See also Case No. 367, page 270.



MISCELLANEOUS CASES

CATALOGUE NUMBER	DESCRIPTION	CATALOGUE NUMBER	DESCRIPTION
Paper and Leatherette-covered Cases		Cases for Magnifiers	
34	Paper, Straight Temple	417	For Magnifiers Nos. M 258 and M 259
35	Leatherette, same as No. 34	Artificial Eye Cases	
39	Paper, Riding, style of No. 202	18 JC	For one Eye, chamois lined
41	Leatherette, Eyeglass, as illustrated	28 IC	For two Eyes, chamois lined
49	Leatherette, Riding, as illustrated	Eye Wipers, for Cleaning Lenses	
49	Leatherette, Eyeglass, as illustrated	11	As illustrated
Cases for Amoptiscopes		12	As illustrated
27	For Amoptiscope No. 1942 1/2	Eye Shades	
37	For Folding Amoptiscope	4	Wylie Patent, Aluminum, silk covered
47	For Amoptiscopes 50 mm. diameter	5	Same as No. 4, except larger
57	For Amoptiscopes 62 mm. diameter	6	"Chicago", silk covered
67	For Amoptiscopes 75 mm. diameter	7	Same as No. 6, except larger

Amoptiscope Cases regularly supplied in I leather.

EYEGLOSS CHAINS
HAIRPINS HOOKS EAR LOOPS
CORDS AND MATERIAL
AUTOMATIC EYEGLOSS HOLDERS





View in Chain Department

EYEGLASS CHAINS

IN presenting the goods illustrated and listed in the following pages, we have no hesitancy in stating that this comprises the most complete and comprehensive line of Eyeglass Chains, Hairpins, Hooks, Ear Loops, Cords and Material ever offered to the optical trade. The principal reason for our supremacy in this branch of the business is found in the explanation that our extensive equipment enables us to produce these goods from the raw material to the finished product. Many so-called "manufacturers" of eyeglass chains buy the chain ready-made from chain makers, who in their turn, buy the wire from wire manufacturers. In some cases the soldering is even "let out" by contract, so that the "chain factory" in reality merely assembles the findings.

Raw Stock From the fine gold we make the alloys of raw stock for gold and gold-filled wire of whatever karat is required, the wire being drawn to the necessary gauge in our own plant. Thus we know to a certainty the exact quality of the chain wire, which is confirmed by careful assays in our laboratories.

Automatic Chain-making Machines Our equipment includes a whole battery of automatic chain-making machines, each one set to make one of our many regular or special forms and sizes of chain links. The output of each machine depends upon the size of link it is making, these sizes varying from 7 to 32 links per 25.4 mm. (1 inch) as shown on page 290. These wonderful little machines can produce thousands of metres of chain daily, ready to be soldered and finished. Other special machinery is employed to flatten and curb the links, as these styles are much in demand.



Placing a tiny piece of gold solder on each link

As the sale of eyeglass chains depends largely upon the variety of styles offered, we have found it desirable from time to time to add new styles in hairpins, hooks, ear loops, etc., to the AOCo line, and are pleased to call special attention to the many new styles listed herein and our comprehensive manner of illustrating them. Other new styles are being added frequently.

Stock We regularly carry in stock more than 3000 metres of gold eyeglass chain and 7500 metres of gold-filled eyeglass chain. In addition, we carry a stock of more than 10,000 dozen of hooks, hairpins and ear loops in gold and gold-filled, and correspondingly large stocks of small material, such as snaps, cords, rings, etc., thus enabling us to promptly meet any demands made by our customers.

Gold Chains We have instituted a new departure in this line by making four weights; $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ added to chain number designating medium, heavy and extra heavy, respectively. Regular weight is designated by the number without adding fraction. On the coarser link chains we recommend using the medium and heavy weights.

Gold-filled Chains We have made notable improvements in this line, adopting as our regular quality 12k instead of 10k gold-filled and using a thicker covering of gold. We make all gold-filled chains with gold soldered links.

Packing In our own printing and box-making departments we cut, punch, print and emboss the cards upon which chains and chain material are mounted and produce the boxes into which they are finally packed. So one can readily appreciate the statement that these chains are essentially an AOCo product from the start.

Quality Careful inspection and rigid supervision by which we control the many operations in chain manufacture insures absolute uniformity in quality, color and workmanship. Comparisons with the products of other factories will at once reveal the superiority of the AOCo line and the usual tests and assays will show an appreciable balance in our favor.



AOCo method of packing chains in anti-tarnish translucent envelopes



Eyeglass
Cords
in folders.
See page 298

Special Chains We are prepared to make special chains, hairpins, hooks, ear loops, cords and material and should be glad to quote on samples submitted by our customers.

Lengths of Chains Our standard lengths for chains (including snap) are as follows:

For Hairpin Chains, 229 mm. (9 inches).

For Hook Chains, 330 mm. (13 inches).

For Short Hairpin Chains, 203 mm. (8 inches).

For Ear Loop Chains, 102 mm. (4 inches).

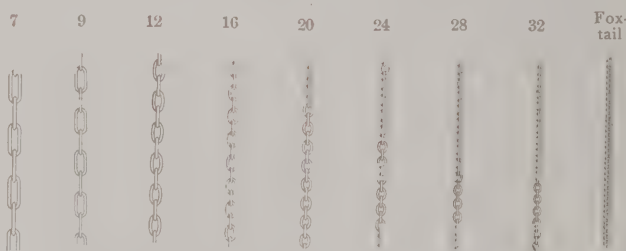
Special lengths of chains will be supplied when so ordered.

Comparative Sizes of Links The accompanying illustration will give a fair idea of the comparative sizes of links referred to in the following pages.

This will be found to be of assistance in selecting the sizes of chains wanted in ordering.

System of Numbering The chains, as will be noted, are listed according to the number of links per 25.4 mm. (1 inch), and the figure in the unit column indicates the style of link, 0 designating cable link; 1 curbed or twisted; and 2 flat or swaged link.

In Ordering complete chains it is necessary to give catalogue number, style of hairpin, hook, ear loops, etc., desired and quality. On hooks, hairpins and material, it is necessary to give catalogue number, or letter and quality. See pages 299, 300 and 301.



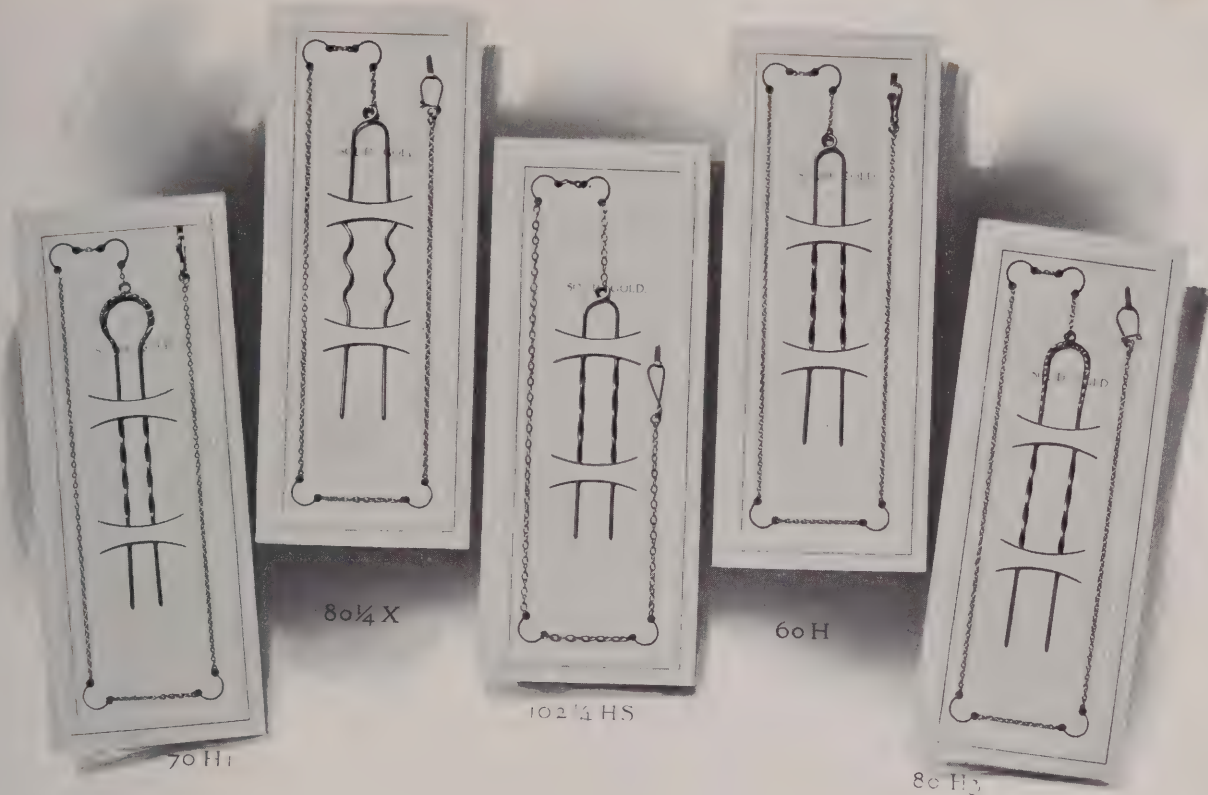
Links per 25.4 mm. (1 inch). Illustration shows full size

"AOCO" AUTOMATIC EYEGLASS HOLDERS.—PATENT APPLIED FOR

Construction In developing the new "AOCO" Automatic Eyeglass Holder, our object has been twofold: First, by reducing the number of parts materially to so simplify the mechanical construction that to take down or reassemble becomes a very simple procedure. Second, we have so designed the mechanism that the three essential features, viz: the drum or reel, the spring, and the catch and pawl are kept separate so that the action of one part can in no way interfere with the workings of any other. This means long service and a perfect action, overcoming the objectionable features of the ordinary types.

Design A few designs for "AOCO" Holders are shown on page 302. We shall add other styles from time to time and announce them through the medium of our publication *Amoptico*.

Guarantee These goods are sold under a liberal guarantee by which we stand prepared to replace any that may be found defective in material or workmanship.

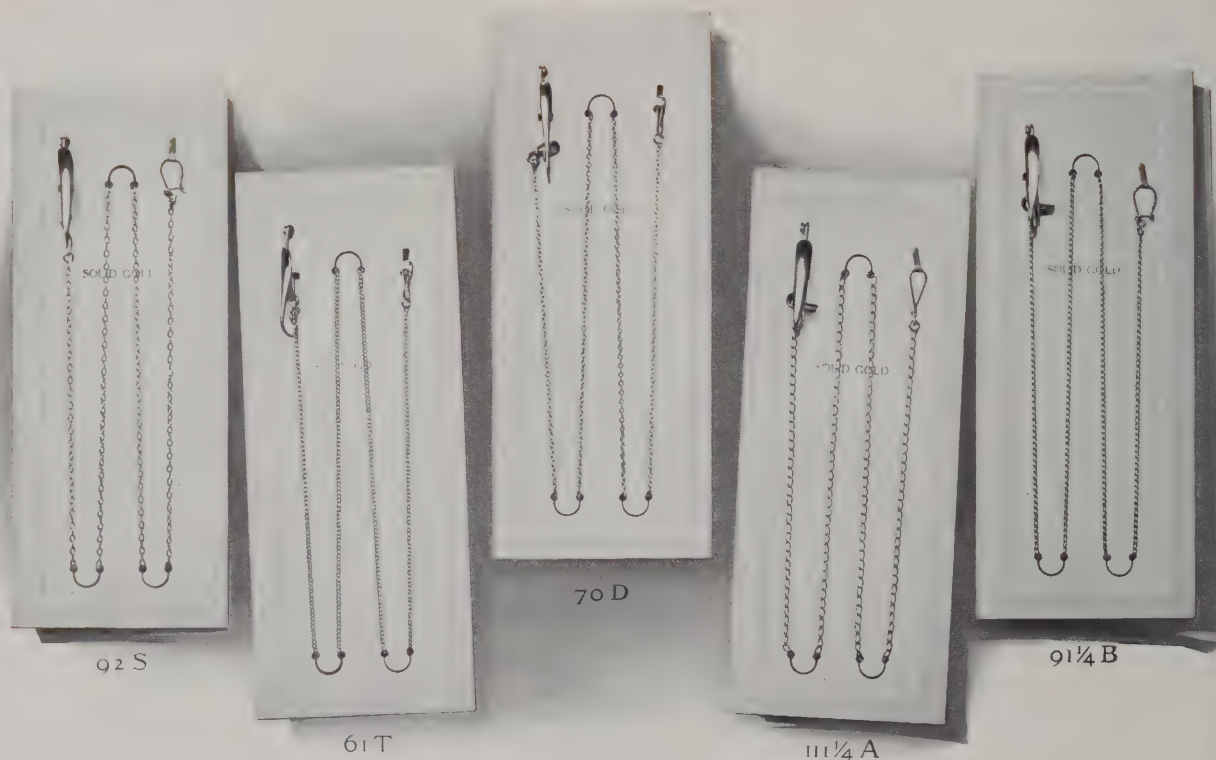


SOLID GOLD HAIRPIN CHAINS

Made in 10k Gold and 14k Gold, also 10k Gold with Gold-filled Hairpins and Snaps

CATALOGUE NUMBER				DESCRIPTION			
Cable Link		Curbed Link		Flat Link	Links per 25.4 mm. (1 inch)		Weight
60	-	61	-	62	-	32	Light
65	-	65-1	-	65-2	-	30	Medium
70	-	71	-	72	-	28	Light
80	-	81	-	82	-	24	Light
80 1/4	-	81 1/4	-	82 1/4	-	24	Medium
90	-	91	-	92	-	20	Light
90 1/4	-	91 1/4	-	92 1/4	-	20	Medium
100	-	101	-	102	-	16	Heavy
100 1/4	-	101 1/4	-	102 1/4	-	16	Light
100 1/2	-	101 1/2	-	102 1/2	-	16	Medium
110	-	111	-	112	-	12	Heavy
110 1/4	-	111 1/4	-	112 1/4	-	12	Light
110 1/2	-	111 1/2	-	112 1/2	-	12	Medium
110 3/4	-	111 3/4	-	112 3/4	-	12	Heavy
110	-		-		-	12	Extra Heavy
	-		-		-	Foxtail	

Always specify style of Hairpin desired. See page 299.
Regular Snaps furnished when other styles are not specified.



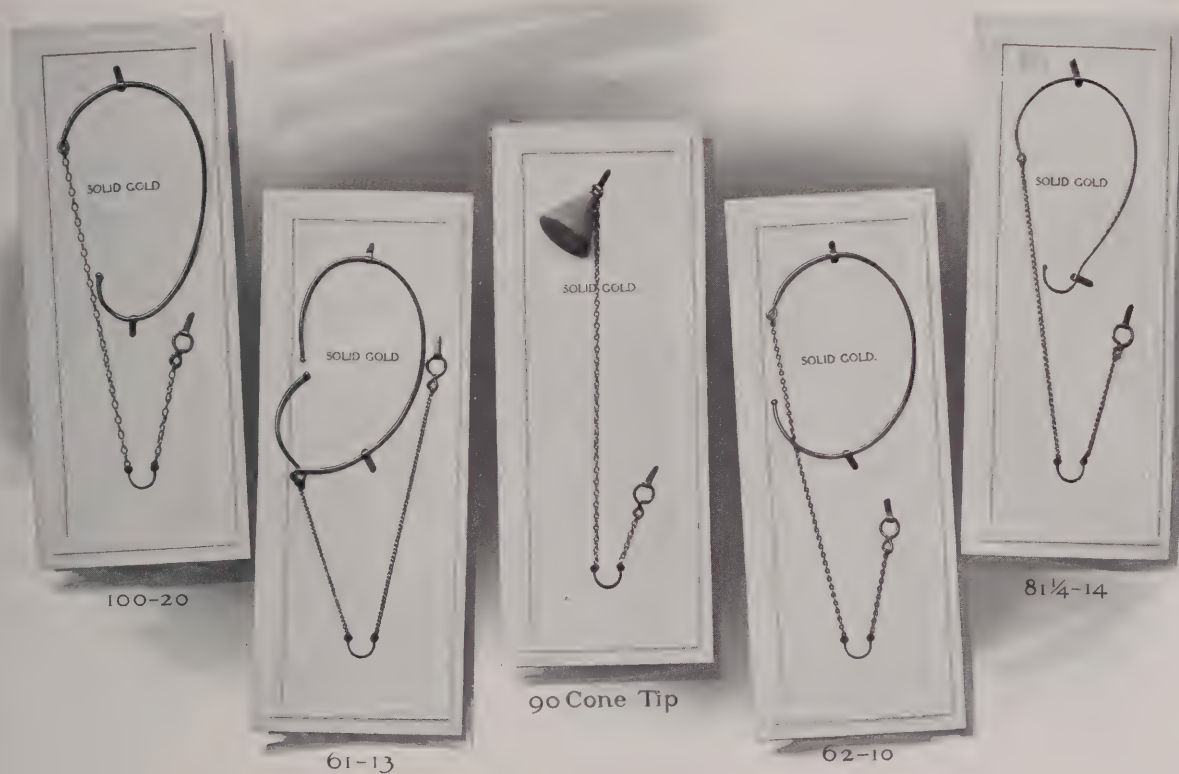
SOLID GOLD HOOK CHAINS

Made in 10k Gold and 14k Gold, also 10k Gold with Gold-filled Hooks and Snaps

CATALOGUE NUMBER				DESCRIPTION			
Cable Link		Curbed Link		Flat Link		Links per 25.4 mm. (1 inch)	Weight
60	- - -	61	- - -	62	- - -	32	Light
65	- - -	65-1	- - -	65-2	- - -	30	Medium
70	- - -	71	- - -	72	- - -	28	Light
80	- - -	81	- - -	82	- - -	24	Light
81 1/4	- - -	81 1/4	- - -	82 1/4	- - -	24	Medium
90	- - -	91	- - -	92	- - -	20	Light
91 1/4	- - -	91 1/4	- - -	92 1/4	- - -	20	Medium
91 1/2	- - -	91 1/2	- - -	92 1/2	- - -	20	Heavy
100	- - -	101	- - -	102	- - -	16	Light
100	- - -	101 1/4	- - -	102 1/4	- - -	16	Medium
101 1/2	- - -	101 1/2	- - -	102 1/2	- - -	16	Heavy
110	- - -	111	- - -	112	- - -	12	Light
111 1/4	- - -	111 1/4	- - -	112 1/4	- - -	12	Medium
111 1/2	- - -	111 1/2	- - -	112 1/2	- - -	12	Heavy
111 3/4	- - -	111 3/4	- - -	112 3/4	- - -	12	Extra Heavy
180	- - -				- - -	Foxtail	

Always specify style of Hook desired. See page 300.

Regular Snaps furnished when other styles are not specified.



SOLID GOLD EAR LOOP CHAINS

Made in 10k Gold and 14k Gold

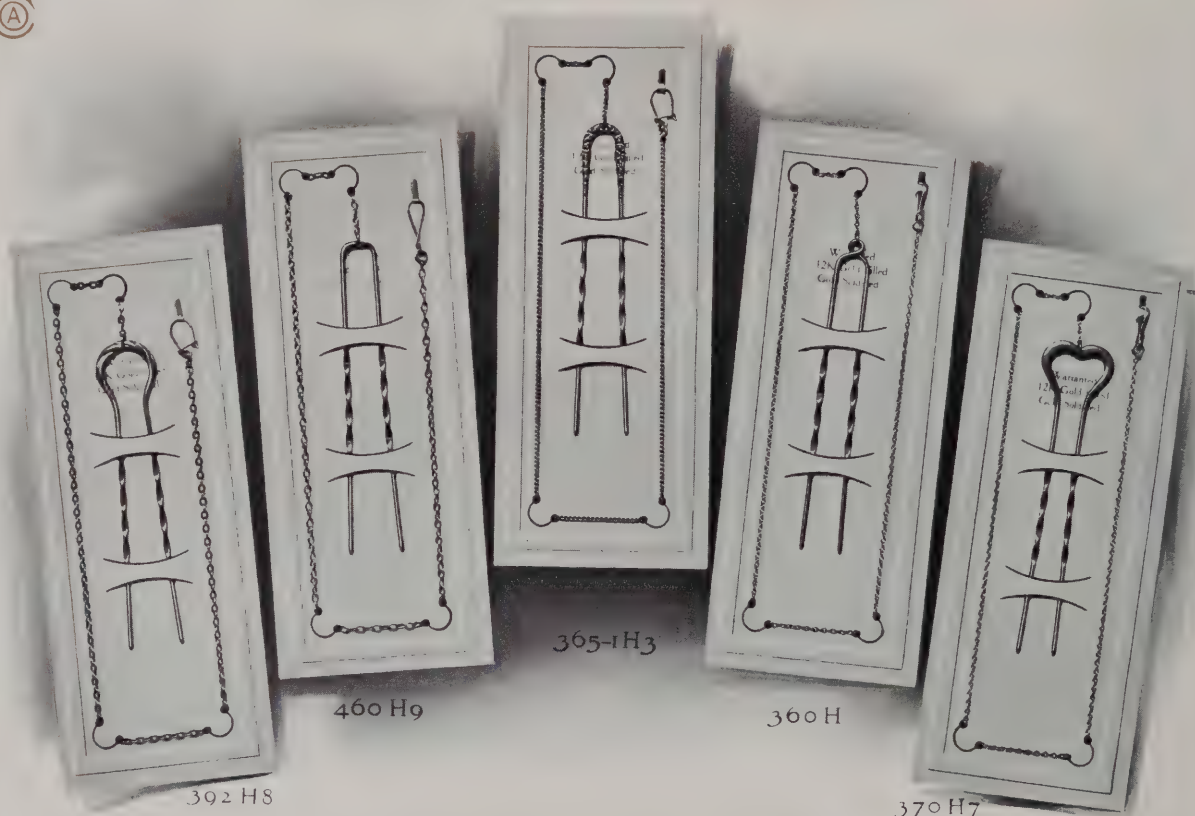
CATALOGUE NUMBER

DESCRIPTION

Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Weight
60	61	62	32	Light
65	65-1	65-2	30	Medium
70	71	72	28	Light
80	81	82	24	Light
80 1/4	81 1/4	82 1/4	24	Medium
90	91	92	20	Light
90 1/4	91 1/4	92 1/4	20	Medium
100 1/2	101 1/2	102 1/2	16	Heavy
100	101	102	16	Light
100 1/4	101 1/4	102 1/4	16	Medium
100 1/2	101 1/2	102 1/2	16	Heavy
110	111	112	12	Light
110 1/4	111 1/4	112 1/4	12	Medium
110 1/2	111 1/2	112 1/2	12	Heavy
110 3/4	111 3/4	112 3/4	12	Extra Heavy
150			Foxtail	

Always specify style of Ear Loop desired. See page 301.

Figure 8 Snaps furnished when other styles are not specified.



GOLD-FILLED HAIRPIN CHAINS

Made in 12k and 14k Gold-filled and Extra Quality 14k Gold-filled. Gold-soldered

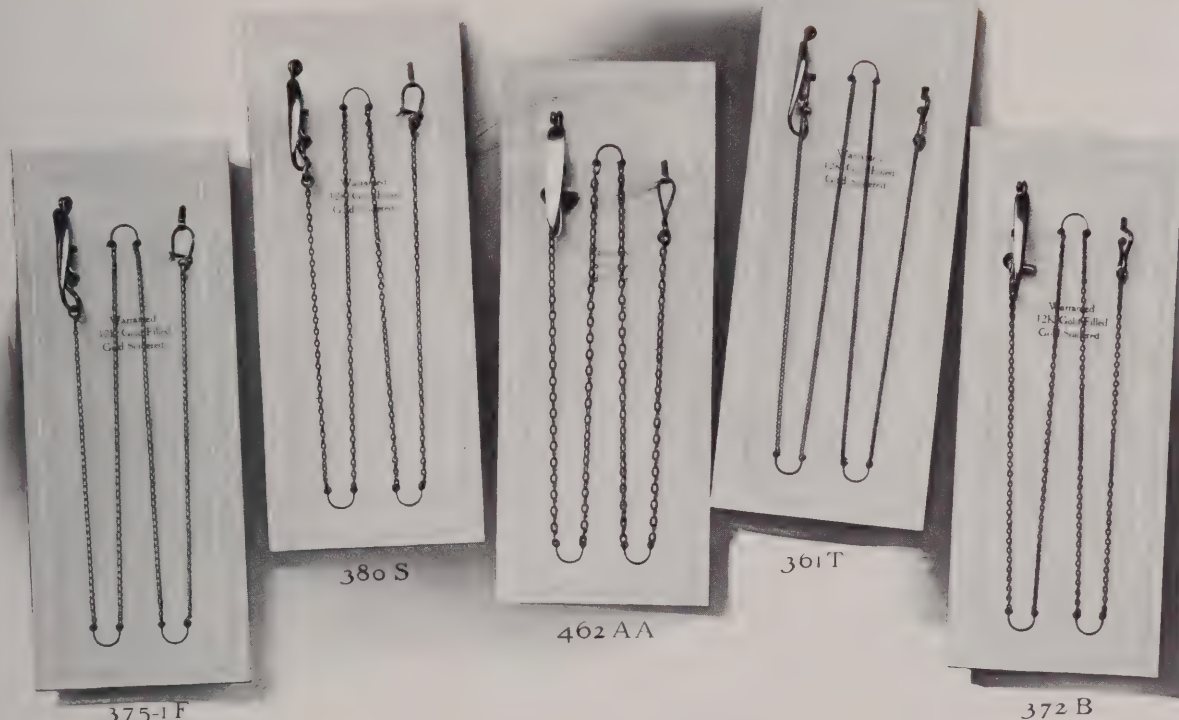
CATALOGUE NUMBER				DESCRIPTION				CATALOGUE NUMBER				DESCRIPTION			
Flat Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Flat Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Flat Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)
360	-	361	-	362	-	363	-	364	-	365	-	366	-	367	-
365	-	365-1	-	365-2	-	366	-	367	-	368	-	369	-	370	-
370	-	371	-	372	-	373	-	374	-	375	-	376	-	377	-
375	-	375-1	-	375-2	-	376	-	377	-	378	-	379	-	380	-
380	-	381	-	383	-	384	-	385	-	386	-	387	-	388	-
385	-	385-1	-	385-2	-	386	-	387	-	388	-	389	-	390	-
390	-	391	-	392	-	393	-	394	-	395	-	396	-	397	-

GOLD-FILLED HAIRPIN CHAINS

Made in 10k Gold-filled. Gold-soldered

CATALOGUE NUMBER				DESCRIPTION				CATALOGUE NUMBER				DESCRIPTION			
Flat Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Flat Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Flat Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Flat Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)
470	-	471	-	472	-	473	-	474	-	475	-	476	-	477	-
480	-	481	-	482	-	483	-	484	-	485	-	486	-	487	-
490	-	491	-	492	-	493	-	494	-	495	-	496	-	497	-
510	-	511	-	512	-	513	-	514	-	515	-	516	-	517	-

Always specify style of Hairpin desired. See page 299.
Regular Snaps furnished when other styles are not specified.



GOLD-FILLED HOOK CHAINS

Made in 12k and 14k Gold-filled and Extra Quality 14k Gold-filled. Gold-soldered

CATALOGUE NUMBER				DESCRIPTION				CATALOGUE NUMBER				DESCRIPTION			
Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)
360	-	361	-	362	-	32	400	-	401	-	402	10			
365	-	365-1	-	365-2	-	30	410	-	411	-	412	12			
370	-	371	-	372	-	28	420	-	421	-	422	14			
375	-	375-1	-	375-2	-	20	430	-	431	-	432	7			
380	-	381	-	382	-	24	450	-	451	-	452	12			
385	-	385-1	-	385-2	-	20	500	-	501	-	502	-			
390	-	391	-	392	-	20									

GOLD-FILLED HOOK CHAINS

Made in 10k Gold-filled. Gold-soldered

CATALOGUE NUMBER				DESCRIPTION				CATALOGUE NUMBER				DESCRIPTION			
Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Fancy Link	Links per 25.4 mm. (1 inch)	Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	Cable Link	Curbed Link
400	-	401	-	402	-	10	513	12	470	-	471	-	472	-	12
470	-	-	-	-	-	12	514	-	480	-	-	-	-	-	12
480	-	-	-	-	-	Foxtail	515	-	490	-	491	-	492	-	9
490	-	-	-	-	-	9	520 (Links not soldered)	21	510	-	511	-	512	-	12

Always specify style of Hook desired. See page 3

Regular Snaps furnished when other styles are not specified.



GOLD-FILLED EAR LOOP CHAINS

Made in 12k and 14k Gold-filled. Gold-soldered

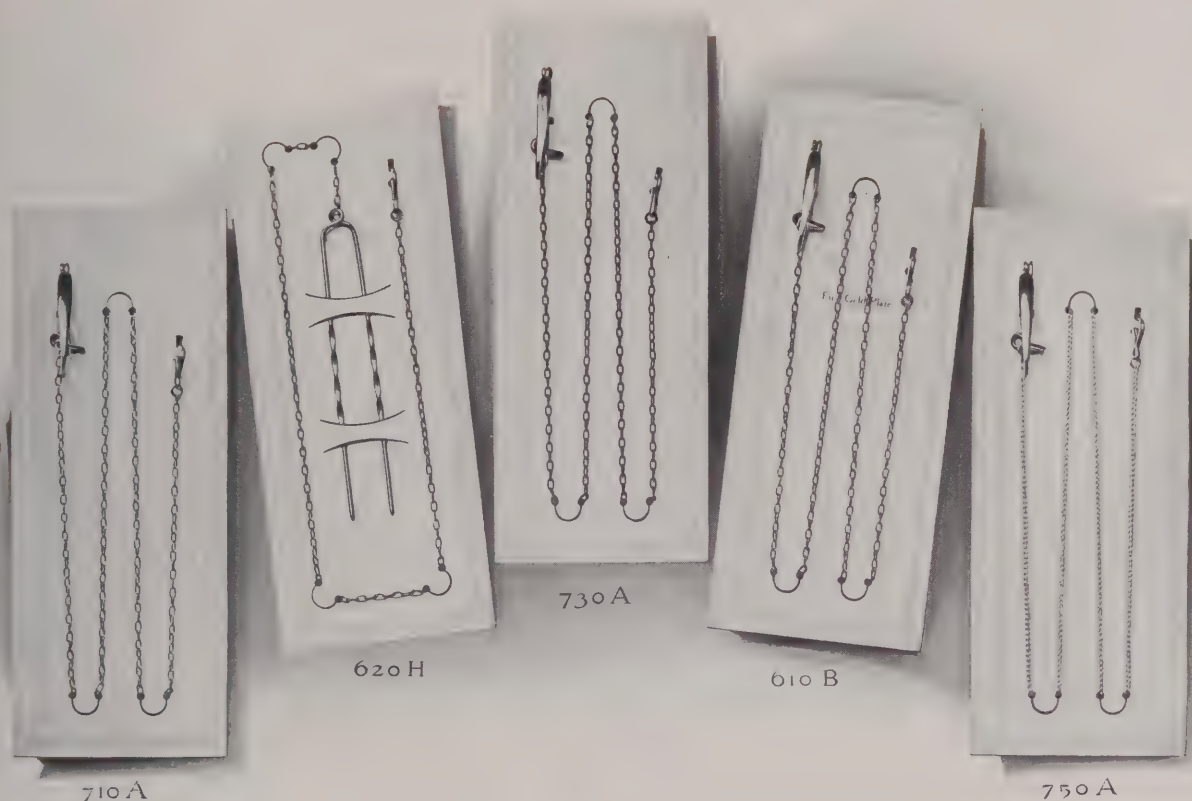
CATALOGUE NUMBER				DESCRIPTION	CATALOGUE NUMBER				DESCRIPTION
Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)		Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	
360	361	362	32		390	391	392	20	
363	365-1	365-2	30		400	401	402	16	
364	371	372	28		410	411	412	12	
373	375-1	375-2	20		420	421	422	9	
376	381	382	24		450	451	452	12	
385	385-1	385-2	20		500	501	502	20	

GOLD-FILLED EAR LOOP CHAINS

Made in 10k Gold-filled. Gold-soldered

CATALOGUE NUMBER				DESCRIPTION	CATALOGUE NUMBER				DESCRIPTION
Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)		Cable Link	Curbed Link	Flat Link	Links per 25.4 mm. (1 inch)	
460	461	462	16		490	491	492	9	
470	471	472	12		510	511	512	12	
480	-	-	26	Foxtail	520	(Links not soldered)			26

Always specify style of Ear Loop desired. See page 301.
Figure 8 Snaps furnished when other styles are not specified.
Cone or Ball Tips furnished instead of Ear Loops when so ordered.



EYEGLOSS CHAINS

Other Metals

CATALOGUE NUMBER			DESCRIPTION			
Cable Link	Curbed Link	Flat Link	Quality			Style
610 -	611 -	612 -	Extra Quality, Gold Plate	-	-	B Hook
620	621 -	622 -	Extra Quality, Gold Plate	-	-	H Hairpin
650			Extra Quality, Gold Plate	-	-	B Hook Foxtail Chain
660	661	662	Coin Silver	-	-	A Hook
670	671	672	Coin Silver	-	-	H Hairpin
710	711	712	Alumnico	-	-	A Hook
720	721	722	Alumnico	-	-	H Hairpin
730	731	732	Rubberoid	-	-	A Hook
730 H	731 H	732 H	Rubberoid	-	-	H Hairpin
750			Aluminum	-	-	A Hook Foxtail Chain
780	781	782	Gun Metal Finish	-	-	A Hook
790	791	792	Gun Metal Finish	-	-	H Hairpin

For styles of Hairpins, Hooks and Ear Loops, see pages 299, 300 and 301, respectively.



SILK EYEGLASS CORDS

CATALOGUE NUMBER		DESCRIPTION	CATALOGUE NUMBER		DESCRIPTION	
Medium	Light	Black Boumel, Regular or "77" Snap	Medium	Light	Gold-filled Lock Snap	
815	814	S BE Hook	824	-	828	F Hook
816	816	K BE Hook	825	-	829	S Hook
817	817	Y BE Hook	826	-	830	H Hairpin
818	818	P BE Hook	827	-	-	Y Hook
819	819	H BE Hairpin	831	-	-	GF Bead Slide
820	820	17 BE Ear Loop				
		Gold-plated, Regular Snap				
841	-	B GP Hook	831	-	L (very light)	Gold-filled "77" Snap
842	-	H GP Hairpin	831	-	(light)	Ear Loop, any style
						Ear Loop, any style

Note: Snap ends furnished with medium and heavy cord, add $\frac{1}{4}$ or $\frac{1}{2}$ to catalogue number.

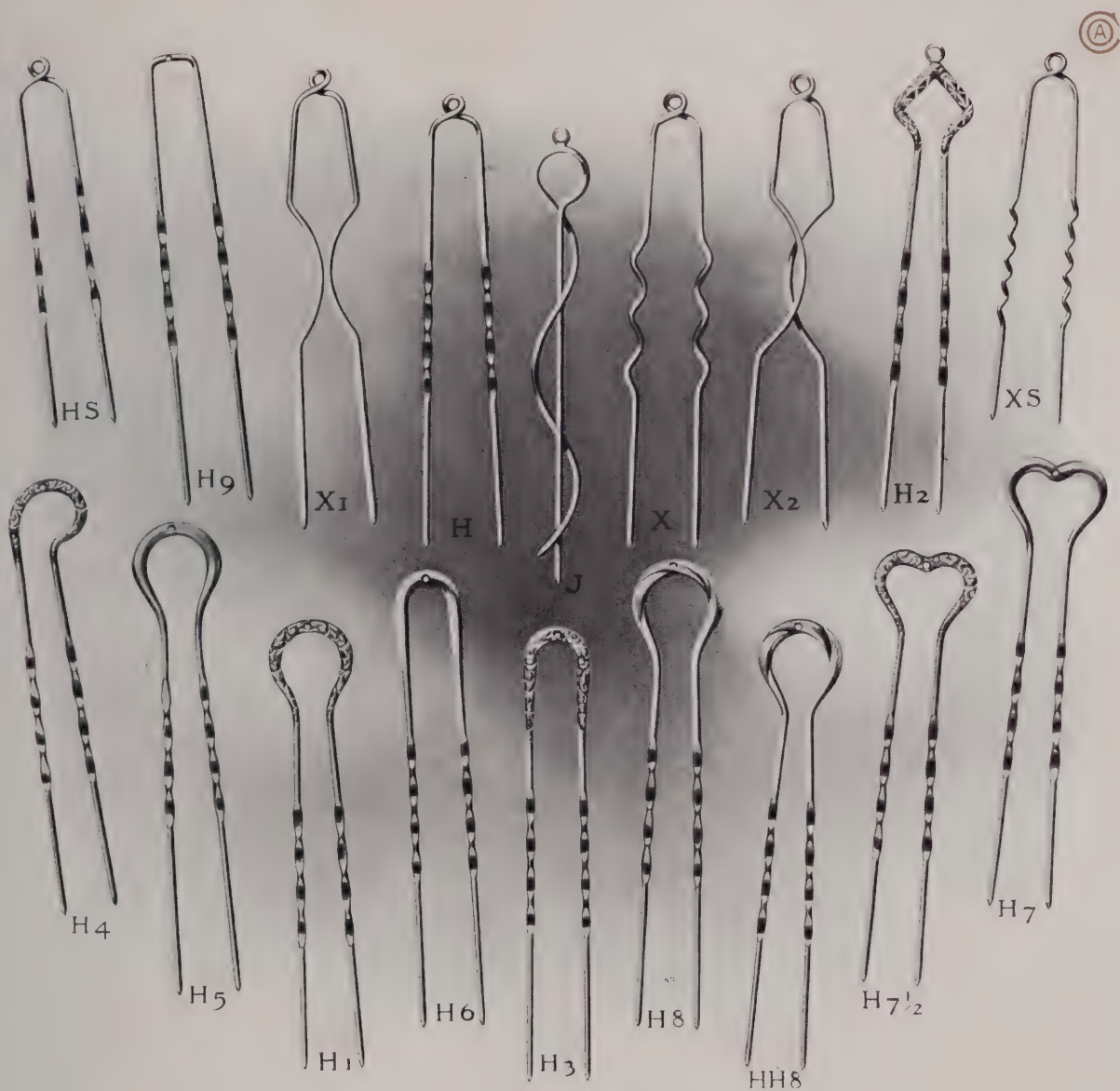
Note: 10 to 14, inclusive, and Nos. 824 to 831, inclusive, furnished in heavy weight if so ordered.

Note: 10 to 14, inclusive, furnished in envelopes unless ordered on cards.

SILK EYEGLASS CORDS ONLY

CATALOGUE NUMBER		DESCRIPTION	CATALOGUE NUMBER		DESCRIPTION	
One Dozen in Bundle	Single Cords in Envelope	Weight	One Dozen in Bundle	Single Cords in Envelope	Weight	
843	850	Very Light	852	-	855	Heavy
844	851	Light	857	-	860	Fish Line
845	852	Medium			865	"Varsity" Ribbon

Note: Nos. 843, 844, 845, 850, 851, 852 supplied one-half dozen in a folder when so ordered. See illustration, page 298.



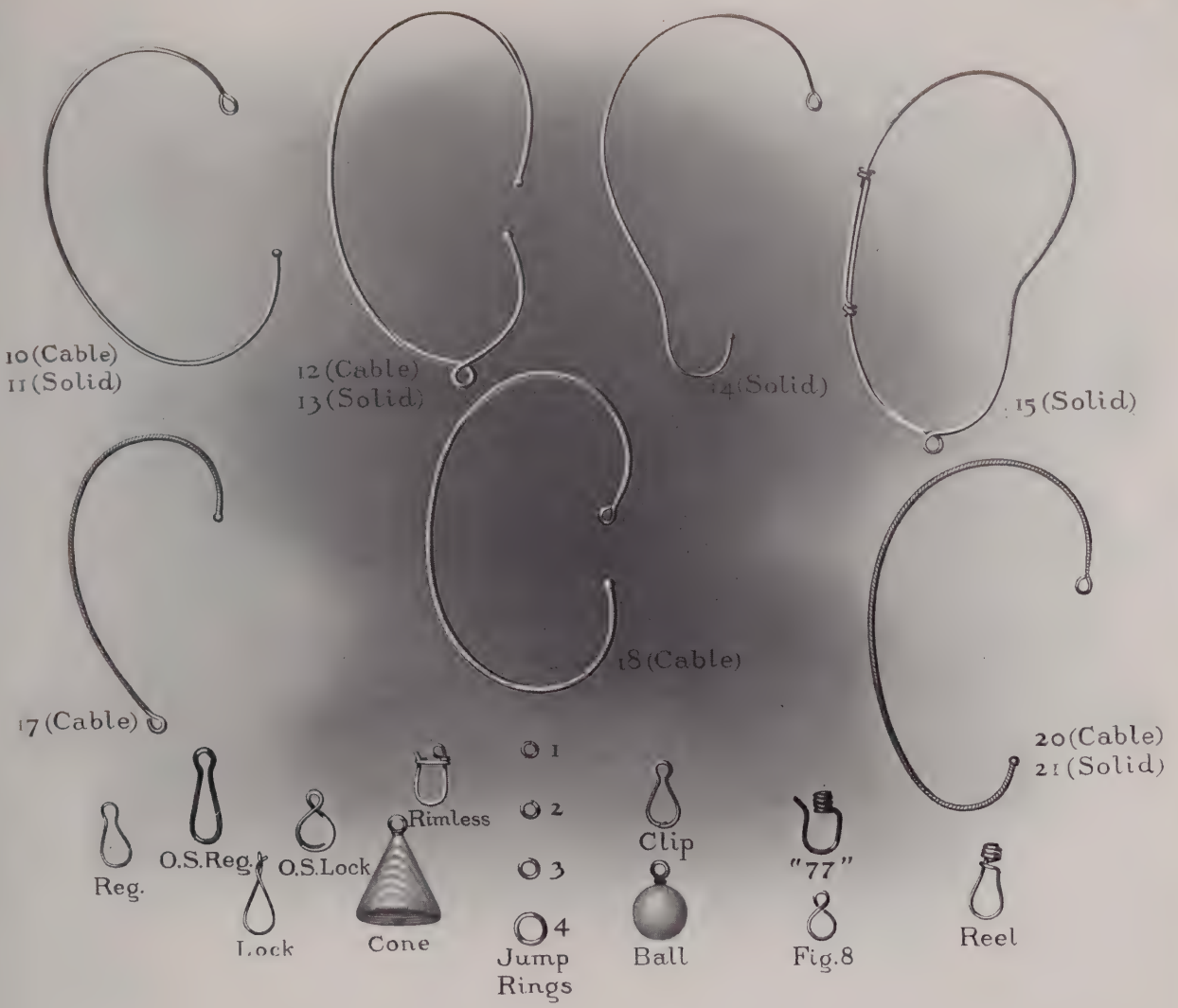
HAIRPINS*

Made in 8k, 10k and 14k Gold; 10k, 12k, 14k and Extra Quality 14k Gold-filled

CATALOGUE NUMBER							CATALOGUE NUMBER							CATALOGUE NUMBER						
H	-	-	-	-	-	-	H 2	-	-	-	-	-	-	H 7 1/2	-	-	-	-	-	-
N	-	-	-	-	-	-	H 3	-	-	-	-	-	-	H 8	-	-	-	-	-	-
J	-	-	-	-	-	-	H 4	-	-	-	-	-	-	H 11 8	-	-	-	-	-	-
HS	-	-	-	-	-	-	H 5	-	-	-	-	-	-	H 9	-	-	-	-	-	-
XS	-	-	-	-	-	-	H 6	-	-	-	-	-	-	X 1	-	-	-	-	-	-
H 1	-	-	-	-	-	-	H 7	-	-	-	-	-	-	X 2	-	-	-	-	-	-

Above Hairpins may be ordered on any style Chain in Gold and Gold-filled.
In ordering Hairpin add catalogue number of Hairpin to catalogue number of Chain and state style of Snap wanted.
* Illustration shows Hairpins full size.





EAR LOOPS, SNAPS, ETC.*

CATALOGUE NUMBER	DESCRIPTION	CATALOGUE NUMBER	DESCRIPTION
10	- - - - - Cable	15	- - - - - Solid Adjustable
11	- - - - - Solid	17	- - - - - Cable Hook
12	- - - - - Cable	18	- - - - - Cable
13	- - - - - Solid	20	- - - - - Cable
14	- - - - - Invisible	21	- - - - - Solid

All SNAPS, except O.S. Regular, furnished in Gold, Gold-filled, Black Enamel (BE), Rubberoid (R), Nickel (N), Gold-plated (GP), and Gun Metal Finish (GM). O.S. Regular Snaps furnished in BE and R finishes only. Snaps ordered separately are furnished one dozen in envelope unless otherwise ordered.

JUMP RINGS furnished in all metals and finishes.

CONE TIPS and BALLS made in White Celluloid only.

In ordering Ear Loop Chains, add catalogue number of Ear Loop to catalogue number of Chains and state style of Snap wanted.

*Illustration shows Ear Loops, Snaps, etc., full size.



“AOCO” AUTOMATIC EYEGLASS HOLDERS.*—PATENT APPLIED FOR

CATALOGUE NUMBER				DESCRIPTION			
				Front	Back		Chain
100	-	-	-	Black Enameled	-	Nickel	German Silver
101	-	-	-	Black Enameled	-	Nickel	Gilt
330	-	-	-	Gun Metal Finish	-	Black Nickel	German Silver
331	-	-	-	Gun Metal Finish	-	Black Nickel	Gilt
333	-	-	-	Gun Metal Finish	-	Black Nickel	Gun Metal Finish
551	-	-	-	Gold-plated	-	Gold-plated	Gilt
620	-	-	-	Coin Silver	-	Nickel	German Silver
751	-	-	-	Gold-filled	-	Gold-plated	Gilt
971	-	-	-	Gold, 10k	-	Gold-filled	Gilt

In ordering give catalogue number and letter denoting design, as: 331 W

Black Enamel Holders supplied in A pattern only.

Gun Metal Finish Holders supplied in A and B patterns only.

Gold-plated, Coin Silver, Gold-filled and Gold Holders supplied in any patterns above illustrated.

In ordering any A and B styles, except White Celluloid or Gun Metal Finish, specify whether bright or dull finish is desired. Designs D, E and W supplied in dull finish only.

*Illustration shows Eyeglass Holders slightly larger than full size; actual diameter 25 mm.

In several features the “AOCO” Automatic Eyeglass Holder presents definite advantages over types of holders now on the market.

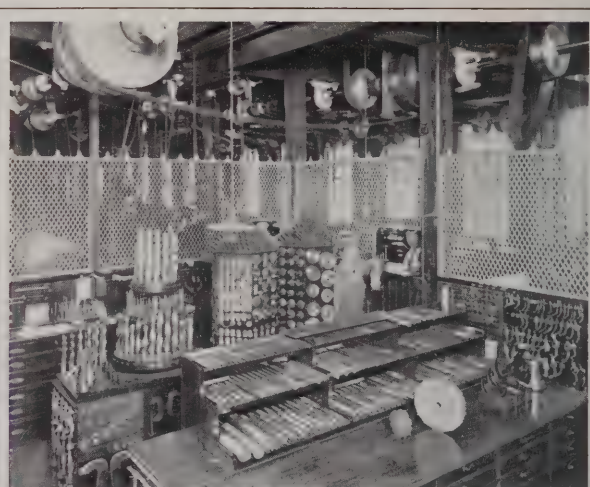
1. It is smooth running with an easy, even tension, and so adjusted that the chain may be stopped at short intervals throughout its entire length when the holder is worn in *any* position.
2. It is easy to repair and adjust.
3. It is fully guaranteed by the manufacturers and therefore insures absolute satisfaction to the purchaser.
4. The rounded edge of the holder, as shown in the profile view above, gives a most attractive appearance to the outer case. New patterns in these goods will be announced from time to time.
Length of chain, 43.3 cm. (17 inches).

OPTICAL MACHINERY TOOLS AND SUPPLIES





View in one of AOC Co Machine Shops



Machine Shop Tool Office

OPTICAL MACHINERY, TOOLS AND SUPPLIES

UNTIL a very few years ago the optician's workshop did not require a very extensive equipment of machinery. Conditions, however, have undergone rapid changes which have made it imperative to-day for the modern shop to have facilities for the quick and accurate service now demanded in the filling of optical prescription orders. These prescriptions call for detailed modifications of spectacles and eyeglasses to an extent impossible to provide for in stock goods and consequently not only the lenses must be specially surface ground and edged, but the services of expert frame workers are required to adjust and assemble the parts to conform to special dimensions and specifications.

These changed conditions have given a definite advantage to the shop that has not only the ablest corps of workmen but the one provided with a complete and practical equipment of machinery and tools.

For many years we have manufactured a line of machinery and tools for the optical trade. These have gained an enviable reputation for their general excellence in efficiency, design, accuracy and facility of operation. American Optical Company machinery has been largely responsible for the high standards of accuracy and the rapidity with which the modern prescription shops handle the large volume of their daily business.

Our long experience in the manufacture of opticians' supplies of every description, designing and constructing our own machinery and tools, has made us competent to originate and develop the most up-to-date equipment for prescription shop practice.

Primarily our line is thoroughly practical, being confined to those machines and tools required for daily use in busy shops where time and efficiency are of first consideration. They represent the ideas of experts developed under ideal mechanical conditions.

Suggestions for Ordering In ordering machinery, tools or supplies of your wholesaler do not cut or mutilate this catalogue, give catalogue number and necessary description sufficient to identify what is wanted and to avoid the possibility of confusion with other lines of goods which may carry similar catalogue numbers.



If Motors or motor driven machines are ordered, always state the kind of current (whether alternating or direct) and voltage. If alternating state also frequency.

In Ordering Parts

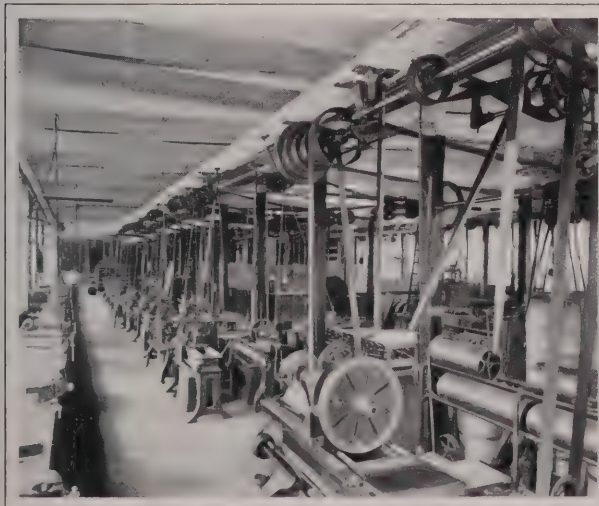
of machines for replacement or repair, give catalogue number, number of machine and full description. Whenever possible send the broken part for further identification or make a sketch.

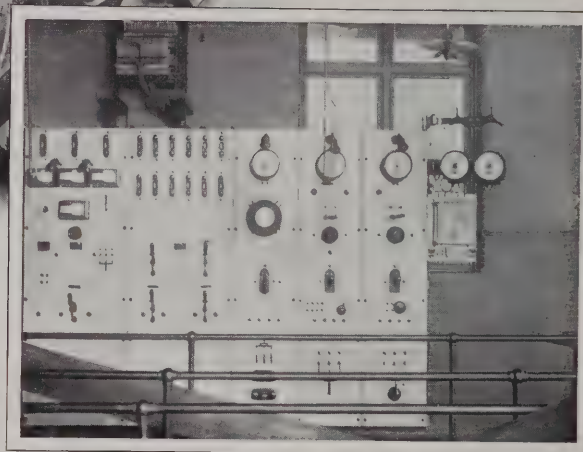
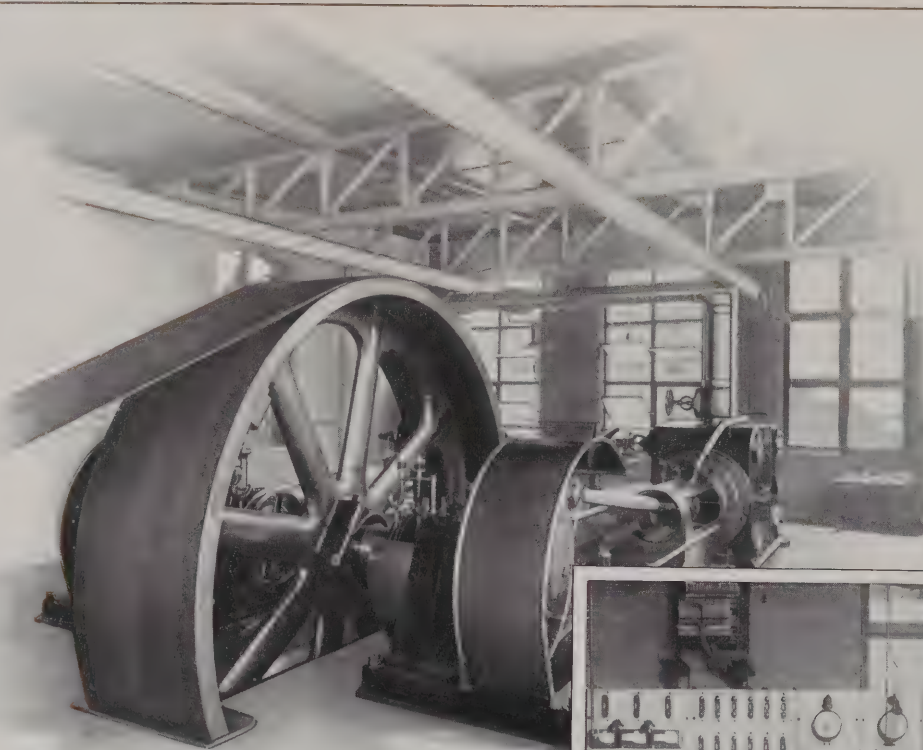
Cutting Diamonds We do not guarantee a cutting diamond to cut all curves of lens surfaces. Unless

otherwise ordered we furnish diamonds to cut the average curves of Pcx., Pcc. and Sphero Cylinder lenses. For stronger convex curves, as Meniscus, Toric and Coquille, it is necessary to provide an extra diamond, set at the proper angle, and still another diamond for strong concave surfaces.

Speed of Drills Diamond drills should be run at a speed of about 2200 revolutions per minute. Steel drills should be run at a speed of about 700 revolutions per minute.

Opticians' Benches On pages 307 and 308 we illustrate two benches each having an equipment suggested with a view of meeting the usual requirements of



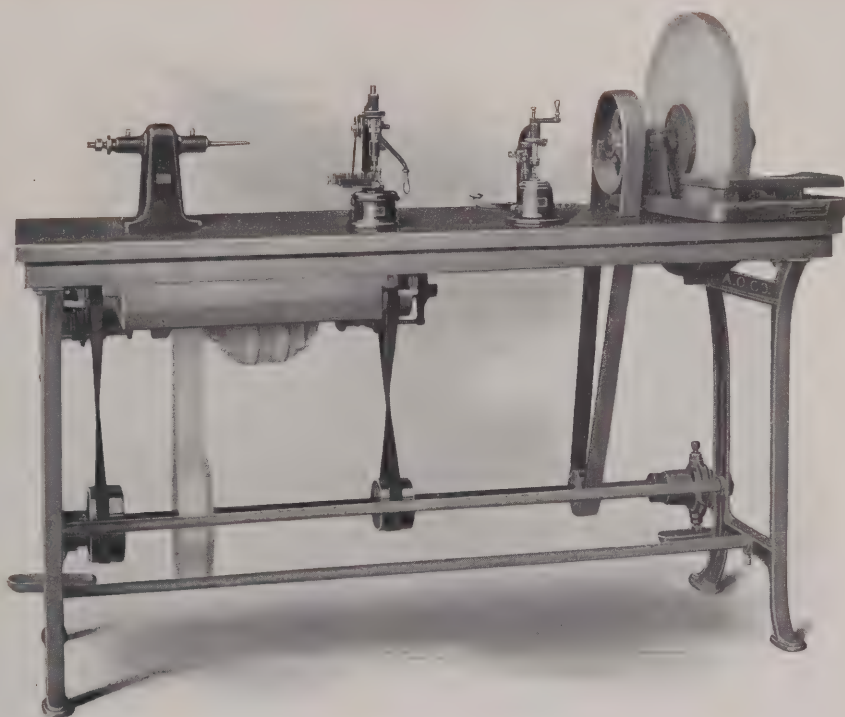


optical shop work. The equipment and arrangement of benches is, however, a matter of individual preference and convenience, and we recommend the selection of machinery as required.

Shipments All shipments are f. o. b. factory. Small tools and machinery are forwarded by express; heavy machinery by freight unless instructions to the contrary are given. In the absence of definite instructions we exercise our own judgment as to the method of transportation and the carrying companies. Every machine is thoroughly tested and rigidly inspected before shipment. Experienced packers are employed and every reasonable precaution is taken to insure safety in transit. Our responsibility ends with the delivery of goods to the express company or railroad in good condition.

Export Orders for complete benches, surface or edging machines requiring special crating are subject to a slight extra charge.

Our Mechanical Department stands ready to advise prospective purchasers in the selection, installation and operation of optical shop equipment. We hope that advantage may be taken of our services in this connection. We publish special booklets upon the operation of many of our machines. A booklet will be supplied with each machine, or will be mailed upon request to any optician who desires information in addition to the descriptions given herein.



OPTICIANS' WORK BENCHES

CATALOGUE NUMBER

DESCRIPTION

- M 1** Opticians' Work Bench, complete as shown, regularly furnished without motor.
 An extra charge is made for fitting M 1 Opticians' Work Bench with $\frac{1}{2}$ horse-power, 110 or 220 volt, 60 cycle, single phase, alternating-current motor, self starting, including pulley on main shaft, belted ready for use.
 If other type of motor is required give complete specifications.
 An extra charge is made if above is required to be specially crated for foreign shipment.

DIMENSIONS

Length 5 feet; width 2 feet 1 inch; height 2 feet 9 inches.

REGULAR EQUIPMENT

- One (1) No. M 81 Corundum Hand Grindstone, see page 315.
 One (1) No. M 92-b "Handy" Drilling Machine, with turned diamond, see pages 324 and 325.
 One (1) No. M 52 "Opticians' Favorite" Lens Cutting Machine (patented), see pages 320 and 321.
 One (1) No. M 131 Polishing and Buffing Head, see page 331.
 Two (2) No. M 11 Countershafts, one with flat-faced and one with grooved pulley, see page 331.

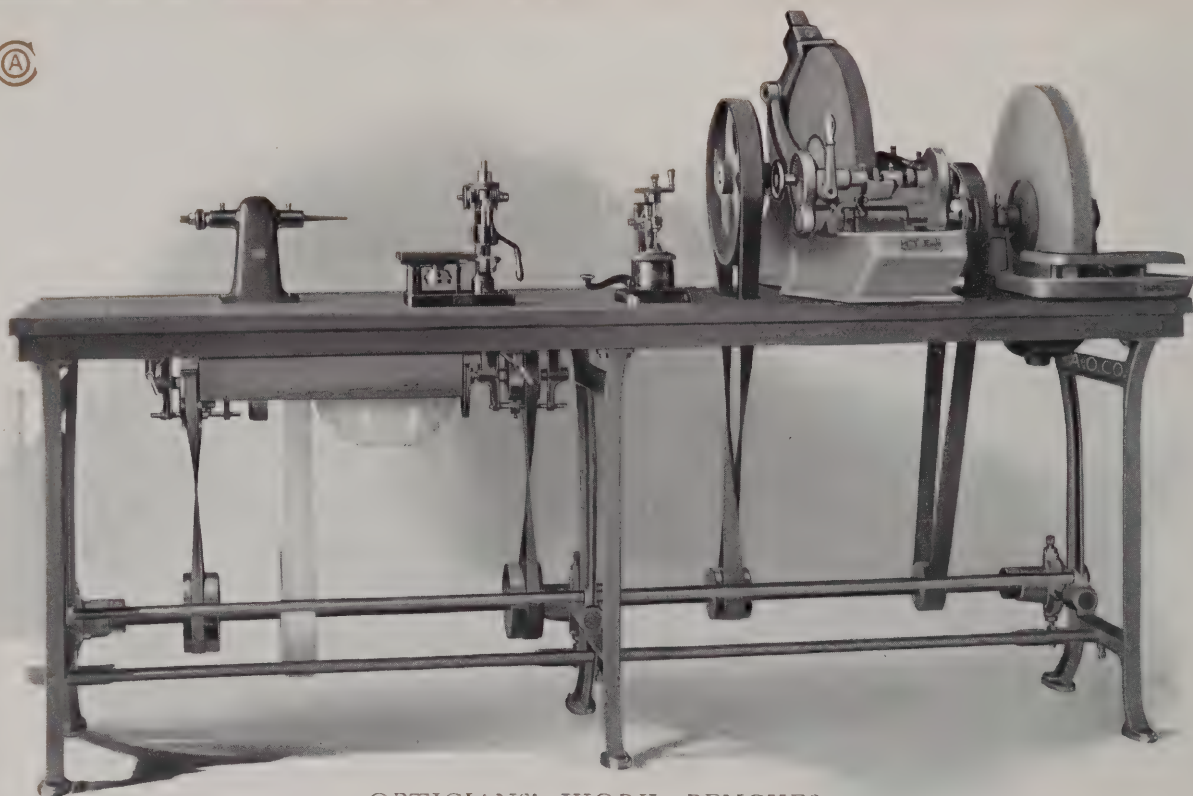
Also necessary pulleys, shafting and belts.

This is one of our newer outfits and is a splendid equipment of machinery at a reasonable cost. The bench top is made of selected seasoned hard wood glued in narrow strips to prevent warping. The cast-iron legs are tied together with rods acting as foot rest and belt guard, and insuring rigidity. A drawer is conveniently placed in position shown, for the accommodation of small tools and materials.

Drill and polishing head is belted to countershafts, controlled from front of bench. All machines except grindstone are so conveniently placed as to permit their use by workman without leaving his seat.

Motor ($\frac{1}{2}$ horse-power) will be furnished when so ordered but is not included in regular equipment.

Prices on special AOCo work benches will be furnished by wholesalers upon receipt of specifications.



OPTICIANS' WORK BENCHES

CATALOGUE NUMBER

DESCRIPTION

- M 2 Factory Work Bench, complete as shown, regularly furnished without motor.
 An extra charge is made for fitting M 2 Factory Work Bench with 1 horse-power, 110 or 220
 volt, 60 cycle, single phase, alternating-current motor, self starting, including pulley on main
 shaft, belted ready for use.
 If other type of motor is required give complete specifications.
 An extra charge is made if above is required to be specially crated for foreign shipment.

DIMENSIONS

Length 7 feet; width 2 feet 1 inch; height 2 feet 9 inches.

REGULAR EQUIPMENT

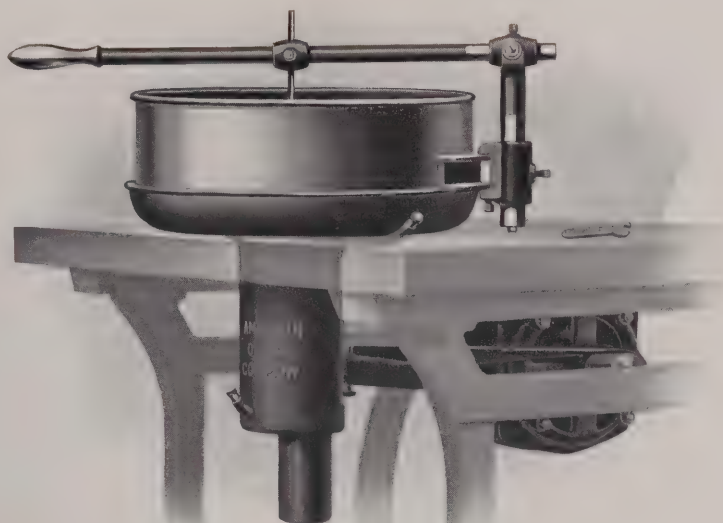
- One (1) No. M 72 AMERICAN Automatic Edging Machine (patent applied for), see page 316.
 One (1) No. M 81 Corundum Hand Grindstone, see page 315.
 One (1) No. M 91-b Factory Drilling Machine (patented), with turned diamond, see pages 322 and 323.
 One (1) No. M 51 Factory Lens Cutting Machine (patented), see pages 318 and 319.
 One (1) No. M 131 Polishing and Buffing Head, see page 331.
 Two (2) No. M 11 Countershafts, one with flat-faced and one with grooved pulley, see page 331.
 Also necessary pulleys, shafting and belts.

This outfit comprises an assembly of the best equipment that we manufacture. The top is made of selected hard wood, well seasoned and glued in narrow strips as a special precaution against warping. Three cast-iron legs support weight of top and equipment. They are strengthened by two rods, as will be noted in the illustration, insuring a strong, rigid bench. Rods also serve as foot rest and belt guard. Drawer is placed in position where it affords the greatest bench room for work.

All machines included in the equipment of this bench are types which have been successfully used in our own factories and are known to be thoroughly practical for the shop where Rx work must be dispatched quickly and accurately.

Motor (1 horse-power) will be furnished when so ordered but is not included in regular equipment.

Prices on special AOCo work benches will be furnished by wholesalers upon receipt of specifications.



LENS SURFACE GRINDING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

- M 21** Bench Surface Grinder, with two pans, regularly furnished without motor or bench. An extra charge is made for fitting M 21 Bench Surface Grinder to bench (price of bench not included) with driving pulley, belts and M 12, heavy countershaft for one or two speeds as ordered.
- An extra charge is made for fitting to bench (price of bench not included) with $\frac{1}{4}$ horse-power, 110 or 220 volt, 60 cycle, single phase, alternating-current motor, self starting, belted direct to machine.
- If other type of motor is required give complete specifications.
- An extra charge is made if above is required to be specially crated for foreign shipment.

When it is convenient to have surface grinding machinery on bench this machine will be found admirably adapted to the work, besides representing a saving in cost over the usual type of pedestal machine.

Power is applied from whatever source is most convenient, to the pulley below the bench top. This machine allows of several methods of power application, may be driven by being belted direct to an electric motor, as shown in the illustration, or may be driven from above or below by means of countershaft.

In the construction of this machine unusual precautions have been taken to prevent emery from getting into the bearings. This is done by providing a wide dust cap which fits over the bearings below pan. In addition a felt washer serves to close the bearings tighter. The upper end of spindle revolves in a phosphor-bronze bushing, which may be removed and replaced by another. The lower bearing is babbitt metal.

The end thrust on spindle when in use is taken up by ball bearings which run in oil. This feature insures smooth running under heavy pressure on grinding tool, with the least possible friction.

All castings and machined parts are substantially made to insure the longest life possible to the machine and to resist wear. Ample provision is made for oiling and cleaning parts, and with reasonable care this machine can be used many years.

Equipment includes two seamless pressed steel pans with heavy wired edge. Swivel which carries the arm is adjustable around rim of frame, to suit the convenience of operator. Arm may also be raised or lowered.

This machine will take any of our grinding tools and toric attachment. Cost of machine does not include bench.

For large Rx shops where a number of bench surface machines are necessary, wholesalers will supply special quotations on complete AOCosurfacing equipment, including bench, shafts, countershafts, pulleys, belts, etc.



No. M 24. Surface Grinder.
See description on opposite page.

LENS SURFACE GRINDING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

- M 24 Surface Grinder, regularly furnished with two pans, crated.
An extra charge is made if above is required to be specially crated for foreign shipment.

The feature of this machine is its powerful, rigid construction, which, together with its smoothness of operation, makes it possible for workman to force the rough grinding of lenses, effecting an important saving in time. As in our Bench Surface Grinder (see page 309) the same provision is made for excluding emery from bearings, and removable phosphor-bronze bushing is furnished, which can be easily replaced. Ball bearings, running in oil, take up the end thrust of spindle and insure the least possible friction under heavy pressure upon grinding disk.

The tool may be driven at two different speeds by shifting position of foot treadle. When treadle is in horizontal position spindle is stopped. Treadle is self locking in each instance. Driving pulleys may be belted from above or horizontally to shafting beneath a work bench. The larger pulleys should run at a speed of 400 and the smaller at 800 revolutions per minute, giving a spindle speed of 600 and 1200 revolutions per minute respectively.

Facilities are provided for oiling and keeping machine in condition and with ordinary care no difficulty need be experienced.

Equipment includes two seamless pressed steel pans reinforced with heavy wire rims. The position of the two removable shelves may be changed if desired. The swivel bracket which carries the lever arm is adjustable around upper rim of pedestal for changing angle of arm to suit the convenience of operator. The height of arm may also be regulated.

Floor space required, 2 feet wide by 3 feet deep.

See illustration on opposite page.





No. M 25. Electric Surface Grinder.
See description on opposite page.

LENS SURFACE GRINDING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

- M 25 Electric Surface Grinder, for direct current, regularly furnished with two pans, crated.
 M 26 Electric Surface Grinder, for alternating current, regularly furnished with two pans, crated.
 An extra charge is made if above are required to be specially crated for foreign shipment.

This machine is complete in itself, requiring no pulleys or belting. It may be placed in any convenient position and wired to the nearest socket.

In operation machine is practically noiseless, the spindle being the only moving part. This feature should be noted and is particularly important where it is necessary to equip shops in which any undue noise is objectionable.

Being electrically driven, power is consumed only when machine is in actual operation. This means an important saving in operating expenses.

Power is furnished by an electric motor mounted on the lower end of grinding spindle. It is entirely enclosed within the casting, so there is no danger of dust or foreign particles getting into armature. Pressure on disk and weight of armature and spindle are carried on ball bearings which run in oil. Special dust caps and washers serve to prevent emery from getting into bearings. Upper bearing is phosphor-bronze, which is removable and may be readily replaced.

Two speeds are provided to drive spindle 600 and 1200 revolutions per minute. Throwing switch over to left starts motor on slow speed. Bringing switch over to right starts high speed. When switch arm is in the vertical position current is off. Switch is self locking in each instance. This two-speed feature will be appreciated at once by the operator.

Motor is capable of developing $\frac{1}{3}$ horse-power, there being four types designed for a 115 or 230 volt direct and 110 or 220 volt alternating current. Wires are attached to rear of machine. Fuses are 6 ampere, and we recommend using this size.

Pedestal is detachable so that the upper unit, including motor, may be fitted in any regular work bench.

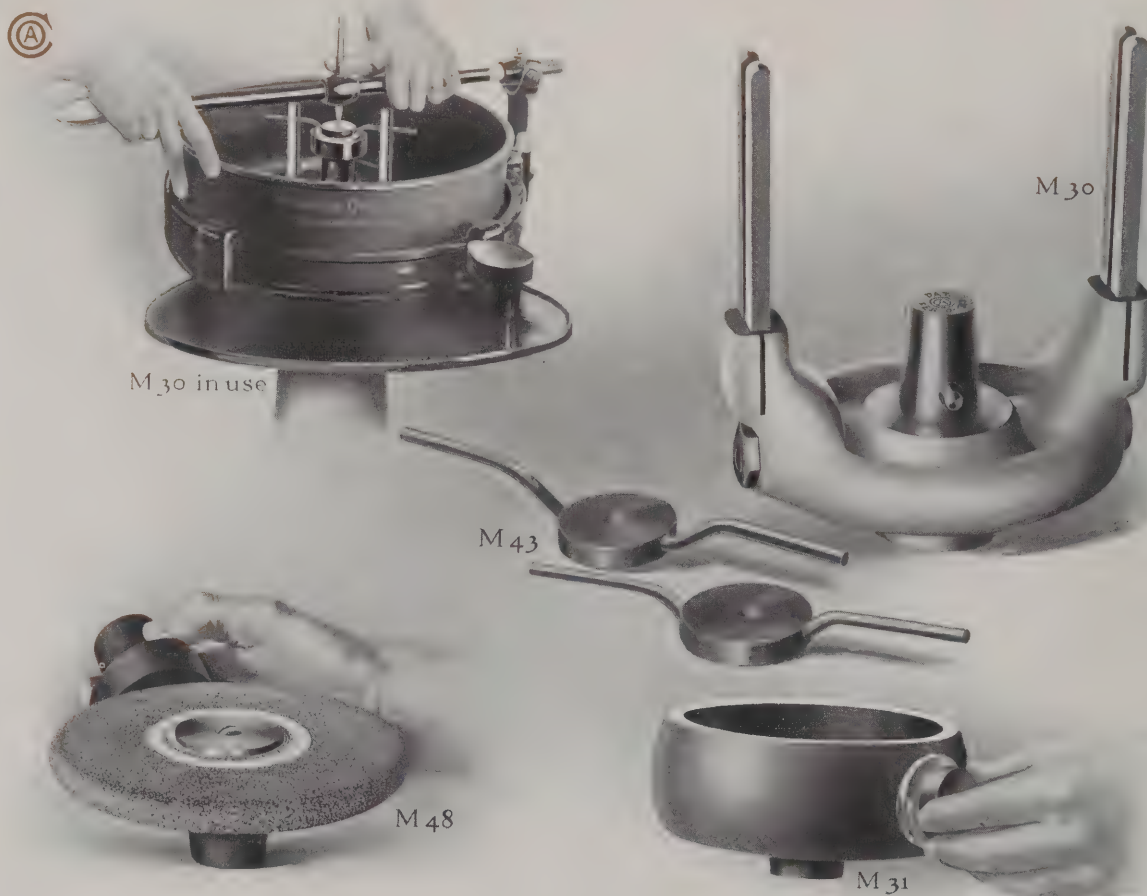
No difficulty need be experienced providing instructions regarding the oiling and care of machine are faithfully followed.

Equipment includes two seamless pressed steel pans reinforced with heavy wire rims, one each for grinding and polishing.

The position of the two adjustable shelves may be changed or they may be removed if desired. The swivel bracket which carries the lever arm is adjustable around rim of pedestal for changing direction of arm to most convenient angle.

We offer this machine as the most advanced type of apparatus for the hand grinding of lenses ever produced. In fact, all the surface grinding machinery here shown represents years of practical study by those who thoroughly understand the requirements of modern prescription shop work. Floor space required is slightly over two feet diameter. This machine is used exclusively in many of the largest prescription shops in the United States.

See illustration on opposite page.



LENS SURFACE GRINDING MACHINERY

CATALOGUE NUMBER	DESCRIPTION
M 30	Patented Cylinder and Toric Attachment, for Surface Grinding Machines, complete with two Blanks.
M 31	†Special Tools, for rough surfacing of Toric curves prior to use of Cylinder and Toric Attachment.
M 48	Carborundum Toric Tool Grinding Wheel.

This device can be instantly attached to any of our surface grinding machines, and we believe it to be the simplest and most satisfactory of anything yet produced for grinding Cylinder, Cross Cylinder and Toric lenses.

The lens is cemented to the cast-iron blank the same as in ordinary surface work. This blank has two pins which extend into the guiding arms of the attachment and prevent its rotating on its own axis. This assures the axis of the lens being in proper position.

In grinding a cylinder, the workman proceeds to grind without any other preliminary work. In grinding Toric lenses, we recommend our M 31 Toric roughing-out tools, which are made to fit any of the spindles of AOCO grinding machines. The Toric surface of the tool is on its outer periphery, and with one of these tools it is possible to rough out the blank to the approximate curve so that the finishing can be quickly done on our M 30 Toric Attachment. These tools are furnished with convex grinding surfaces in the following curves: (base 6 D.) 6.50, 7.50, 8.50, 9.50, 10.50 and 11.50. Use tool nearest to curve wanted for roughing.

We will send an illustrated descriptive circular with full directions for operating upon request.

† See footnote, page 332.



LENS EDGE GRINDING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

M 80 Grindstone on legs, as illustrated.

M 81 Grindstone without legs, for bench use.

An extra charge is made for fitting M 80 Grindstone with $\frac{1}{4}$ horse-power, 110 or 220 volt, 60 cycle, single phase, alternating-current motor, self starting, belted ready for use.

If other type of motor is required give complete specifications.

An extra charge is made if above are required to be specially crated for foreign shipment.

An extra charge is made for fitting to bench, including belt and pulley on main shaft.

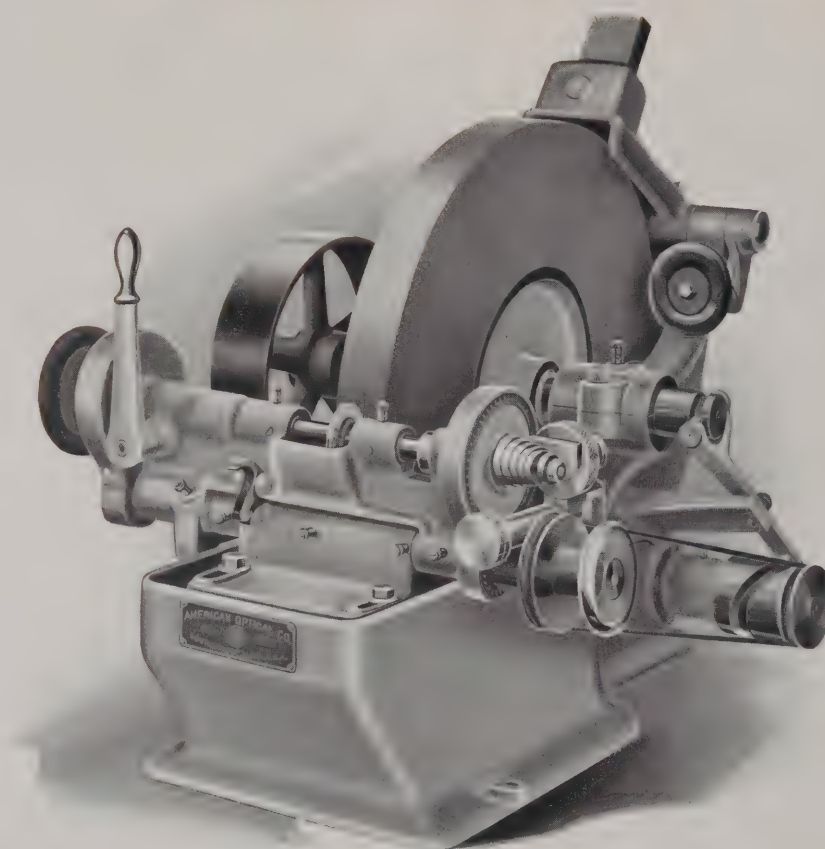
An extra charge is made if above are ordered to be crated for foreign shipment.

This is a special corundum grindstone, 20 x 1 $\frac{1}{2}$ inches, mounted in tub having outlet for water, equipped with pulley, as illustrated.

As will be noted from above, we can also furnish this grindstone mounted on legs, with $\frac{1}{4}$ horse-power electric motor, also without legs, for bench use.

The extra charge for setting on bench includes labor of cutting bench to take tub and belts.

Exceptional care is exercised in the selection of suitable stones for hand grinding to insure a perfectly homogeneous cutting surface.



LENS EDGE GRINDING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

M 72 AMERICAN Automatic Frameless Edging Machine complete, without legs, for bench use, patent applied for.

An extra charge is made if above is required to be specially crated for foreign shipment.

This machine has been designed to meet the exacting demands of modern prescription shop conditions in the edging of frameless lenses. In rapidity, accuracy, automatic and adjustment features it excels any machine previously offered.

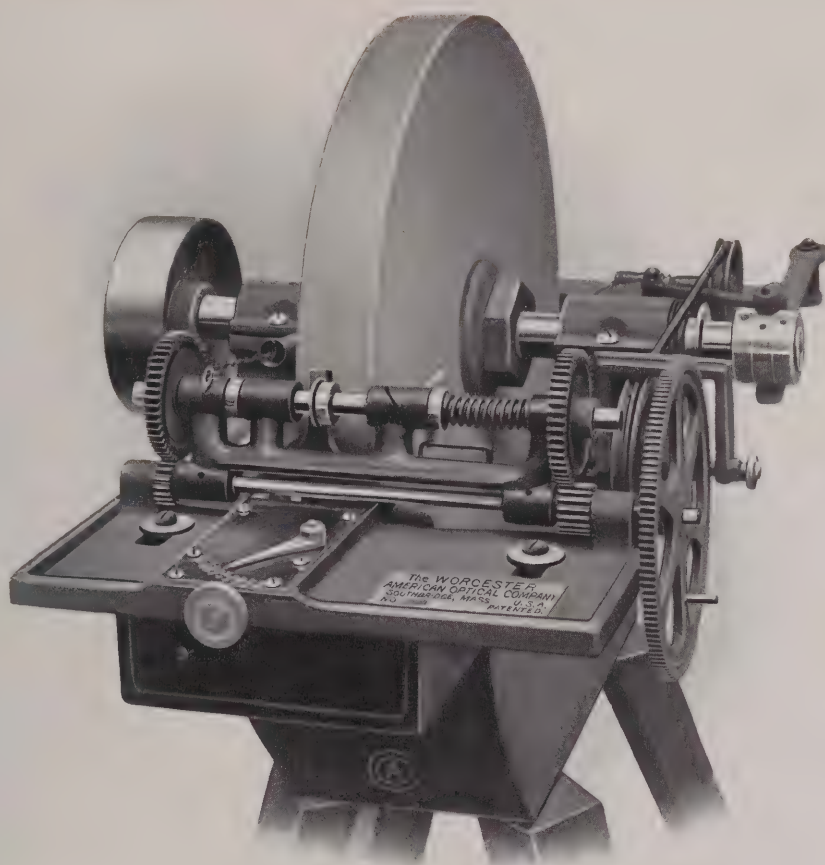
To grind a lens, adjustment for shape can be made instantly. Two pairs of lenses can be edged as easily and as quickly as a single lens. Lenses are held between special universal pads which can be quickly drawn apart.

The desired size of lens is obtained by adjusting a micrometer head marked with the standard and millimeter sizes.

All lens patterns are affixed to the end of the spindle, and no changing of formers is necessary, except where irregular shaped eyes are required, for which a special former set is supplied. The adjustment for size and shape is effected independent of the lenses.

It is impossible to do good work on any edging machine when the face of the wheel is not in good condition, and this point has not been neglected. This machine is provided with a honing device constantly acting on the face of the stone in order to maintain a smooth cutting surface. This hone is so constructed that it will remove all unevenness in the surface, adjusting itself automatically. Stone is of corundum, 16 x 1½ inches, and mounted on large bearings, which ensure long service without repairs.

A special lens holder is furnished with each machine in which the lenses can be properly centered and then placed between the pads. A water drip bucket (not shown) is a part of the regular equipment.



LENS EDGE GRINDING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

- | | |
|------|--|
| M 73 | Worcester Automatic Frameless Edging Machine, with legs, patented. |
| M 74 | Worcester Automatic Frameless Edging Machine, without legs, for bench use, patented. |
- An extra charge is made if above are required to be specially crated for foreign shipment.

The AOCo Worcester Machine possesses many desirable features which particularly adapt it for prescription work in busy shops. Its principal feature is extreme simplicity in construction and operation. Its design is such that any wear on bearings in no way affects the shape of the lenses being ground.

Lenses are centered in a special spring-holding device in which they may be accurately set to axis before placing them between the chucks in the machine. The pattern is placed next to the lenses, thus at the same time precluding any possibility of grinding off axis. The lens-holding mechanism is kept under tension against the face of grindstone. This tension can be easily adjusted.

The Worcester Machine will grind lenses exactly the shape of pattern used, the size being set by an indicator on the forward shelf. It is merely necessary to turn the thumbscrew in front to get the exact length and width in millimeters. As many as six lenses may be ground at one time.

The grindstone is 18 inches in diameter with 2-inch face, and is made of a special grade of corundum, which we have found to be the best for lens grinding. The equipment includes a truing device for keeping the face of the stone in perfect condition.

Every Worcester Edging Machine is carefully inspected and tested before shipment.

Price of machine is the same, with or without legs, although the latter makes a difference in weight with corresponding reduction in freight charges.



No. M 51 Factory Lens Cutting Machine.
Detail of removable pattern at right.
See description on opposite page.

LENS CUTTING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

M 51 Factory Lens Cutting Machine, complete with diamond, patented.

This is a development of our former model Factory Lens Cutting Machine, which means that it represents the concrete result of many years of experience and the most severe test to which such machinery can be put, viz.: constant factory use.

PATENTED DIAMOND HOLDER. This device provides an adjustment to vary the shape of ovals so as to make a difference in mean and extreme diameter of 6, 7, 8, 9 or 10 mm. as well as a micrometer adjustment to determine size to which lens is to be cut. In short, it is possible to cut any full or narrow ovals without the necessity of changing patterns. A chart is furnished with this machine which explains the adjustments for cutting special shapes.

A change of patterns, however, is necessary when it is desired to cut round lenses or odd shapes. By a half turn of thumbscrew (see illustration), pattern may be instantly removed and replaced with another. We provide two patterns with each machine, viz.: oval and round.

Tension of diamond holder against pattern can be regulated from base of machine.

Pressure of lens holder upon the surface of lens may be regulated by thumbscrew at top of machine. Exerting pressure upon handle at left brings lens up into contact with diamond. Diamond remains stationary while lens is revolved.

Diamond is set to cut Pcx., Pcc. and Sphero Cylinder lenses of surface curvature up to about 6 dioptries. For stronger convex, such as Meniscus, Toric or Coquille, or strong Concave lenses it is necessary to provide *extra diamonds*. In ordering, state kind of lenses it is intended to cut.

Without reserve we pronounce this the best Lens Cutting Machine for opticians' use.

We will send full detailed description with directions for operating upon request.

See illustration on opposite page.



No. M 52. Opticians' Favorite Lens Cutting Machine
Attachment for cutting round lenses, in foreground.
See description on opposite page.

LENS CUTTING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

M 52 Opticians' Favorite Lens Cutting Machine, with diamond, patented.

In this machine, the diamond holder embodies all the features of the patented holder used upon our No. M 51 Lens Cutting Machine, providing two important adjustments to determine shape of eye and size to be cut. A special chart which is furnished will be found of assistance in cutting any of the special shapes. To cut round lenses a little steel plate (in foreground of illustration), is fitted into diamond holder. This operates against the round sleeve above pattern. By an adjustment of micrometer head it is possible to cut any desired sizes.

Unlike our Factory Lens Cutting Machine, the lens is held stationary while diamond revolves. Some opticians prefer this method of cutting.

Center rod carries a tripod with rubber pad at base which securely holds lens in position when table is raised in contact with diamond.

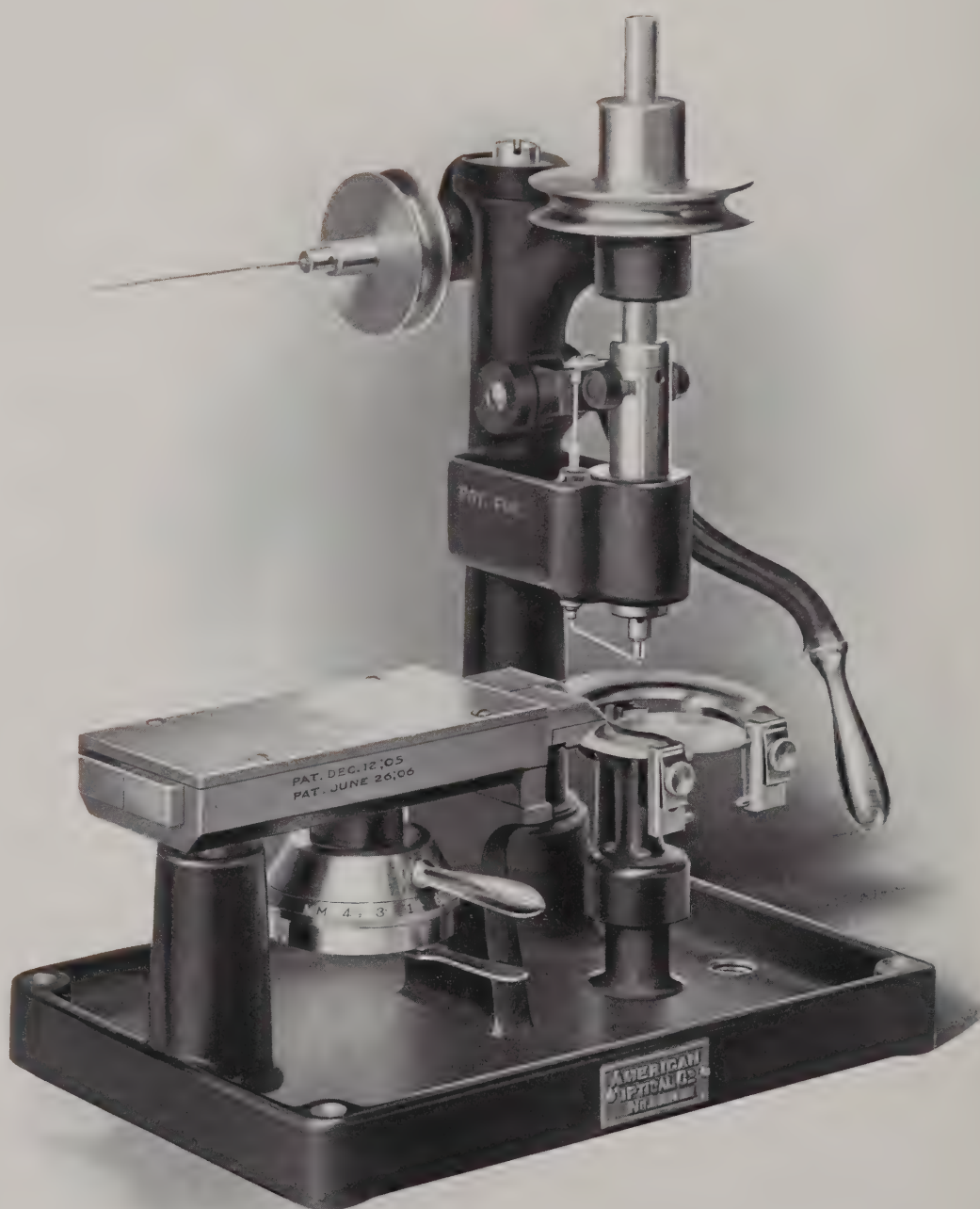
The diamond holder is held against the pattern by spring tension; and by means of a connecting lever, which operates on a form like the lens pattern, a uniform pressure is obtained. This assures a very even motion to the diamond, as there is no tendency to jump over the high points on the pattern, and consequently you obtain a better cut on the glass, and the life of the diamond is prolonged. The spring tension is easily regulated by means of a thumbscrew in the lever carrying the diamond holder.

These machines are thoroughly tested and adjusted before leaving the factory, and will need adjusting only when diamond is re-set.

All diamonds for this work are mounted in stems which are interchangeable and which cannot be inserted in any but the proper position. In ordering state kind of lenses diamond is to be used upon (see page 305).

We will send an illustrated descriptive circular with directions for operating upon request.

See illustration on opposite page.



No. M 91-b. Factory Drilling Machine.
See description on opposite page.

LENS DRILLING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

- M 91 Factory Drilling Machine, with steel drill.
 M 91-a Factory Drilling Machine, with splint diamond drill.
 M 91-b Factory Drilling Machine, with turned diamond drill.

An extra charge is made for attaching to bench, including M 11 countershaft, belts and pulleys.

Patented.

Realizing the weak points in many of the lens drilling machines that have been placed on the market, we have endeavored to overcome these, and at the same time offer new features never before embodied in this line of optical machinery.

In drilling lenses the melange becomes charged with small particles of glass, and these work into the slides and other moving parts, causing them to soon wear out. This machine is so designed as to keep the melange from the slides and important parts of the machine, and at the same time has a lens holder which is very accurate and convenient to operate.

The jaws which hold the lens are opened by means of the small lever directly underneath the slides. The graduated head to which the lever is attached indicates the position of the hole in regard to the center of the lens. By depressing the lower spring lever the lower half of the head may be revolved, making it possible to drill from 4.5 mm. above to 4.5 mm. below center.

The lens holder swings so that the edge of the lens is brought into contact with the adjustable stop, which is directly back of the center of the drill. This stop is pivoted so that it accommodates itself to the curve of the lens whether drilling on line, above or below, and insures the drilled hole always being the correct distance from edge of lens. When drilling lenses of regular curvature the slides at the ends of lens-holding jaws may be down, allowing the lens to lie in a horizontal position.

To drill a Toric or Meniscus lens these slides may be raised as high as possible, allowing the lens to be placed in the holder in such a position that the drill will always enter at right angles to the surface of the lens.

A feature to which we wish to call special attention, and one that will be readily appreciated by those having had experience in drilling, is the method of applying melange to the cutting point of the drill. At the left of the spindle is placed a reservoir for melange in which there is a spring valve operated by the spindle of the drill when it is brought down in the operation of drilling. Any desired amount of melange can be obtained at each movement of the spindle. With this attachment, it is no longer necessary to apply the melange by hand.

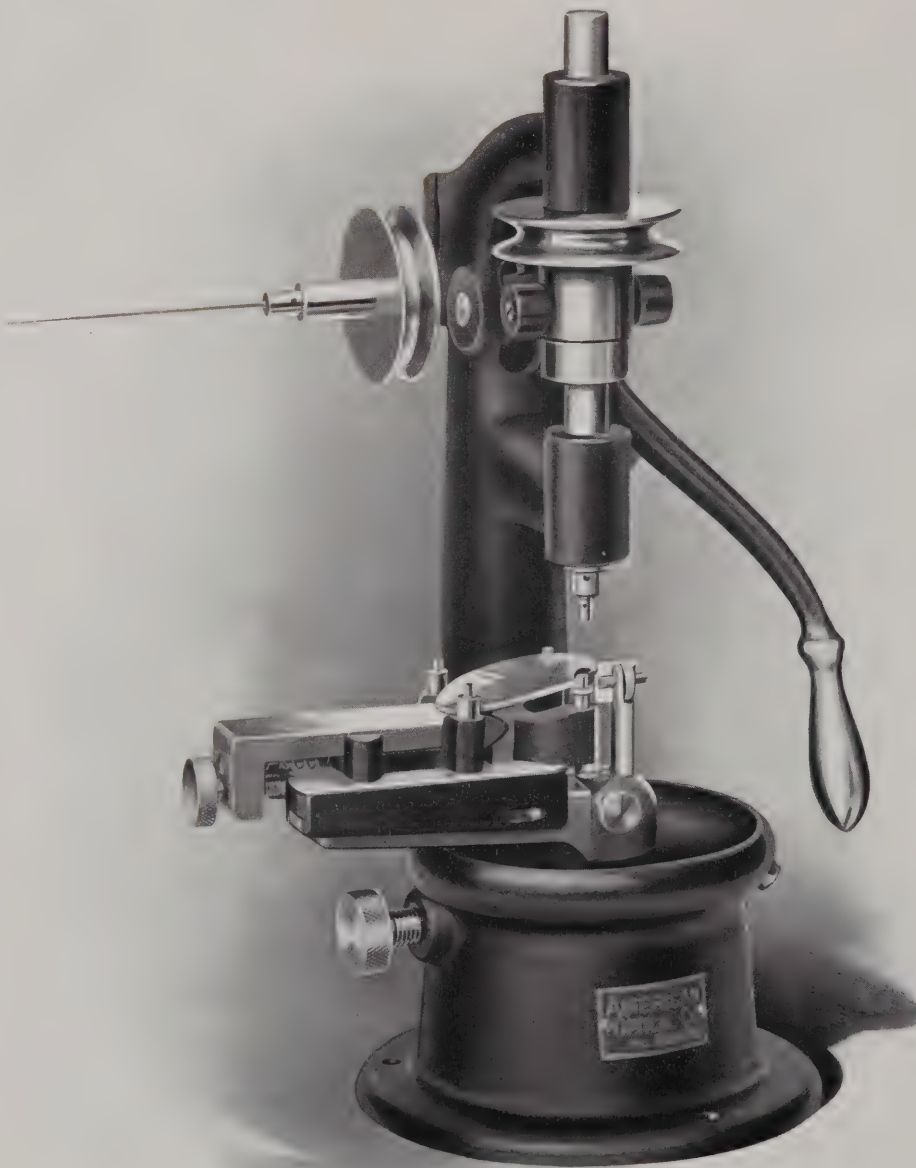
All drills for this machine are fitted with taper shanks, which assures their running true, an absolute necessity for accurate work. An adjustable stop is provided so that any depth of hole can be readily obtained. The driving pulley is arranged to run on a sleeve, which takes all belt strain from the spindle.

The idler pulleys, which allow of belting machine from above or below, also drive a spindle provided with taper holes. This can be utilized to carry a broach, or tool for rounding off the ends of glass screws.

Our factory machine is built in the most thorough manner, and we guarantee it to do accurate work.

We will send an illustrated descriptive circular, with directions for operating, upon request.

See illustration on opposite page.



No. M 92-b. Handy Drilling Machine.
See description on opposite page.

LENS DRILLING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

M 92 Handy Drilling Machine, with steel drill.

M 92-a Handy Drilling Machine, with splint diamond drill.

M 92-b Handy Drilling Machine, with turned diamond drill.

An extra charge is made for attaching to bench, including M 11 countershaft, belts and pulleys.

This lens drilling machine has been designed to meet all conditions which may present themselves in daily Rx shop practice.

Any lens to be drilled correctly must be properly centered, and held in a rigid manner. The lens holder furnished with this machine is of simple construction, yet very efficient. It is mounted on a round stem, thus making it possible to elevate it to accommodate different lengths of drills, and to turn it at any angle to suit the operator. All parts can be readily removed for cleaning.

To drill a lens of regular curvature operator places lens between the four centering pins, letting it rest on the slides of the machine, then moves the slides forward until the edge of the lens strikes the adjustable stop, which is arranged to locate easily and quickly the distance of the hole from the edge of the lens.

If a support under the drill is necessary, center pin may be released by turning the small thumbscrew, and the spring under the pin will bring it into contact with the lens. The pin is then clamped in this position.

Toric lenses may be drilled in a similar manner, but instead of placing them flat upon the slides, they are placed one end on the projections on the centering pins as in the illustration. The operator will readily see the proper position the lens should take as with this holder it is possible to drill the holes at right angles to the surface of the lens at the point of drilling. The adjustable center pin will be found of great assistance in this class of work.

The holder can be readily swung to one side to drill above and below center.

This machine is arranged to take our regular drills and broaches mounted in taper shanks.

The frame is so designed that all the melange which drops from the lens is collected in the cup at the base of the holder, thus preventing its spreading on the bench.

Pulleys are so mounted that the machine can be belted from any direction.

The workmanship is of the highest order, and we guarantee that this machine will do accurate work.

See illustration on opposite page.



LENS DRILLING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

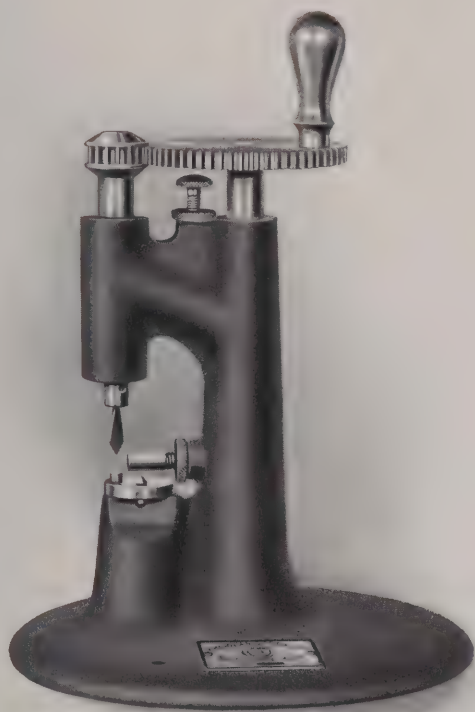
- | | |
|--------|--|
| M 93 | Simplex Drilling Machine, with steel drill. |
| M 93-a | Simplex Drilling Machine, with splint diamond drill. |
| M 93-b | Simplex Drilling Machine, with turned diamond drill. |
- An extra charge is made for attaching to bench, including M 11 countershaft, belts and pulleys.

To meet the demand for a first-class, low-priced power driven lens drill we offer the Simplex. The workmanship and finish on this drill are of the same high grade as on all our other tools.

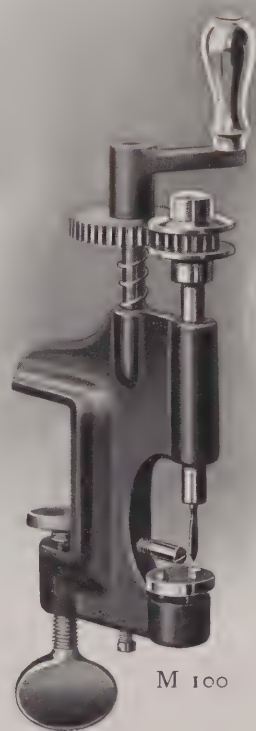
The machine is arranged to take our regular steel and diamond drills, and the idler shaft at the back will hold broach or rounding tool. The idler pulleys are so attached that the machine can be belted from any direction. A positive stop with screw adjustment is so placed as to prevent the drill going below any desired point.

The lens is supported on a steel pin directly under the drill. This can be readily raised and lowered, and is of proper length to allow of drilling all forms and sizes of lenses.

An adjustable stop is placed at the proper distance from the drill to determine accurately the distance the hole should be from the edge of the lens. For speed of drills see page 305.



M 99



M 100

LENS DRILLING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

- M 99 Hand Drilling Machine, with steel drill.
 M 99-a Hand Drilling Machine, with splint diamond drill.
 M 99-b Hand Drilling Machine, with turned diamond drill.

This machine may be attached to bench, wide base giving it additional stability. It will be found absolutely satisfactory for small shops where only occasional drilling is necessary. Spindle will take any of our diamond drills. As with our No. M 100 Hand Drilling Machine, there is provided a flat rest for drilling first side of lenses and pointed rest which may be turned into position to drill opposite side.

An adjustable stop is provided to determine distance of hole from edge of lens.

- M 100 Hand Drilling Machine, vise attachment, with steel drill.

This machine will perform good and accurate work. It may be fastened to work bench and readily removed when not in use. It is furnished with steel drill and has an adjustable stop to determine distance of hole from edge of lens. Flat lens rest may be set for drilling first side of lenses after which pointed rest may be turned into position to drill opposite side.



LENS CENTERING DEVICE

CATALOGUE NUMBER

DESCRIPTION

M 112 Lens Centering Device.

To provide a device at a reasonable price with which to center lenses, we offer the above as a most useful appliance for busy shops. Lens to be centered is held against hard rubber points of upright fork and center is sighted through pin hole in forward arm. When center of lens is over intersection of principal cross lines, the lens may be "dotted" with ink. For strong lenses there is provided a means of sliding the target forward within the focal distance. The rod supporting target is marked at the proper distance where target should be placed when decentering for prismatic power. At this point the principal vertical lines of the target represent power in prism dioptres.

Device may be tilted to any desired angle to suit the convenience of workman. Wide base is provided to give stability if not convenient or desirable to attach to bench.

We prepare special ink for centering and axis marking, see No. M 320, page 338.



THE COLMASCOPE

Trade Mark Registered, U. S. Pat. Off.

CATALOGUE NUMBER

DESCRIPTION

M 121 Colmascope, patented; other patents pending.

The Colmascope, by virtue of the practical application of certain known laws of light, will give to the observer an exact knowledge of the strain or absence of strain in any lens under observation. Take, for instance, the average rimless job you deliver. Frequently such a job is sent by mail and received by the customer broken, notwithstanding careful packing and having been apparently in perfect condition when mailed. The annoyance and the loss which in practically every instance is suffered by the consignor represents a considerable item in the year's business.

Hitherto there has been no practical means of testing lenses for strain after being mounted ready to wear. It was for this purpose we devised the Colmascope which is so simple in its use and so effective in what it shows as to be invaluable to all opticians. This instrument is thoroughly scientific in its principles of light control and with it the stress or strain is brought out clearly, whether caused mechanically by a tightly driven screw or physically by defective annealing.

The Colmascope is wonderfully effective as a money saver and its cost is so reasonable as to bring it well within reach of those who might only have occasional use for such an instrument. It is handsomely constructed in mahogany and its appearance would enhance the furnishings of any store or office.

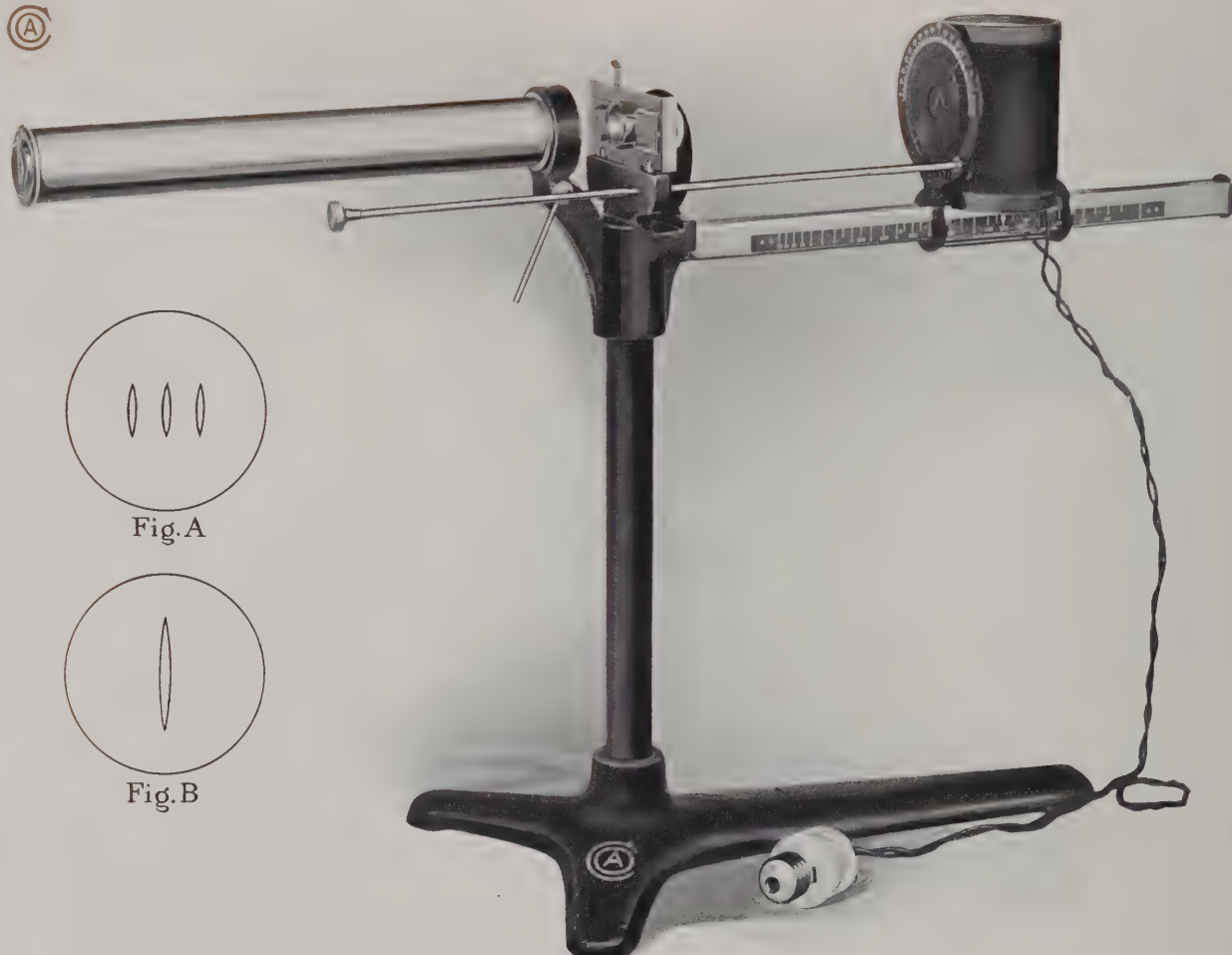



Fig.A

Fig.B

THE AXOMETER

CATALOGUE NUMBER

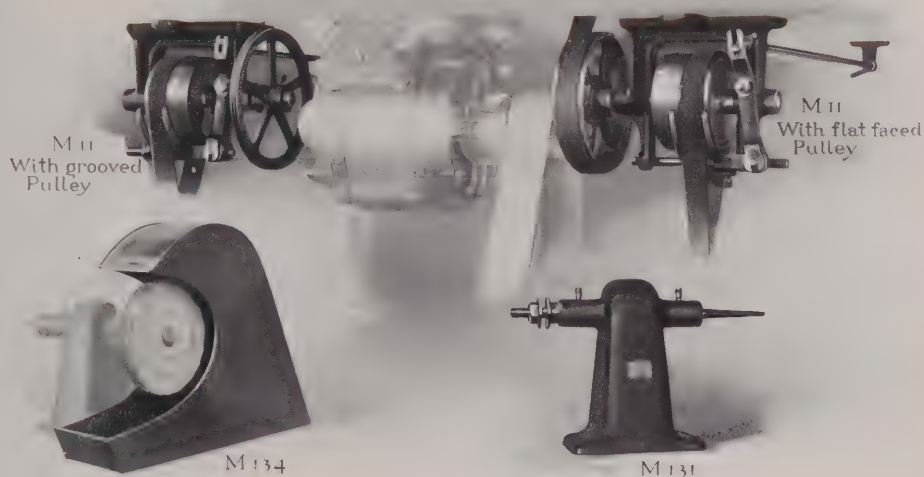
DESCRIPTION

M 115 Axometer, patented.

The AOCo No. M 115 Axometer presents an entirely novel principle in lens-testing. With it one may obtain an accurate check on all prescription work, verifying any job, whether it involves Spheres, Cylinders or Sphero Cylinders. It absolutely determines the focus of sphere and cylinder, and gives the axis *within one degree*.

With the determining of the axis the operator of the Axometer simultaneously obtains the focus, so that one operation furnishes a complete check on any finished prescription. It makes no difference whether the lens is a Sphere, Cylinder, or Sphero Cylinder, Flat or Toric, or combined with a Prism. Both axis and focus are determined by a method radically different from the ordinary axis-marker.

The lens to be tested, whether mounted or unmounted, is held exactly in the center of a special, patented holding device and placed in front of the telescope. Three images are projected through this lens and brought to a sharp focus upon a ground glass (Fig. A). By revolving the diaphragm these three images are dissolved into one (Fig. B). Both axis and focus are correctly indicated upon their respective scales. The operation of the instrument is so simple that the most inexperienced person can obtain perfect results, the axis being located within one degree. Illumination is supplied by an electric bulb within an asbestos chimney. The instrument may be connected to any nearby lamp socket.



MISCELLANEOUS EQUIPMENT

CATALOGUE NUMBER

DESCRIPTION

- M 131** Polishing and Buffing Head.
An extra charge is made for attaching to bench, including M 11 countershaft, belts and pulleys.

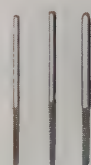
This machine is of an improved design recently introduced by us. Pulley of spindle shaft is enclosed within casting so that there is no danger of work becoming entangled with belt. General design and construction of machine is well shown in illustration. Left end of spindle is recessed to receive M 162 glass-screw finishing tool.

- M 134** Sheet Metal Hood, for polishing wheel.
M 11 One-speed Countershaft, for drills, polishing head, etc., with flat-faced or grooved pulley.
M 12 One-speed Countershaft, heavy construction, for bench surface machine, grindstone, etc.

The above countershafts consist of frame with tight and loose pulleys with extended shaft which allows of attaching any size or style of pulley up to 10 inches diameter. Shipper-rod is provided to throw belt from front of bench.

In ordering, specify whether flat-faced or grooved pulley and diameter required.

Above illustrations show countershafts as they are usually attached and belted from under side of bench top.



M153



M154



M155



M156



M157

MISCELLANEOUS TOOLS AND SUPPLIES

CATALOGUE NUMBER

DESCRIPTION

- M 35 †Spherical Tools, for surface grinding, 4½ inches diameter (regular finish, in pairs, all curves).
- M 36 †Spherical Tools, all curves, same as No. M 35, except smooth finish.
- M 37 †Cylindrical Hand Tools, 3½ x 5 inches, all curves, regular finish.
- M 38 †Cylindrical Hand Tools, same as No. M 37, except smooth finish.
- M 39 †*Cylinder or Toric Tools, 2¼ x 2½ inches, for patented Cylinder and Toric attachment, all curves, regular finish, 3 D., 6 D. or 9 D. base.
- M 40 †Cylinder or Toric Tools, same as No. M 39, except smooth finish, 3 D., 6 D. or 9 D. base.
- M 41 †Metal Gauges, for above tools, all curves.
- M 42 Iron Blanks, for blocking lenses in surface grinding.
- M 43 Iron Blanks with Arms, for No. M 30 Toric attachment (see page 314).
- M 44 Special Blank, having nine pin holes for grinding prisms or correcting prismatic surfaces.
- M 45 Carborundum Slab, for truing grinding tools and grindstones.
- M 46 Wooden Block, for grinding strong sphericals.
- M 58 Diamond, for AOCo Patented Factory Lens Cutter, mounted in stem.
- M 59 Diamond, for "Opticians' Favorite" Lens Cutter, mounted in stem.
- M 61 Patterns, for AOCo Patented Factory Lens Cutter, all regular sizes.
- M 62 Pads, for AOCo Patented Factory Lens Cutter, in sets of four.
- M 78 Patterns, for AMERICAN Automatic Edging Machine, regular sizes.
- M 102 Steel Lens Drill, in holder.
- M 103 Steel Lens Drills, without holders, in dozen lots.
- M 104 Splint Diamond Drill, in stem.
- M 105 Turned Diamond Drill, in stem.
- M 107 Steel Drills, for No. M 100 Hand Drilling Machine.
- M 108 Reamer, for lens drill in shank.
- M 109 Reamer (broach) only, without shank.
- M 153 Screw Taps, specify for what screws taps are wanted.
- M 154 Screw Plates, made with three holes (Nos. 70, 460, 490).
- M 155 Adjustable Screw Threading Dies.
- M 156 Temple Burrs.
- M 157 Solder Burrs.
- M 157-a Solder Burrs, style of No. M 157, with shank to fit hand broaching machines.
- M 158 Universal Screw Tap Set (see Material Section, pages 178 and 179).
- M 163 Blades, for No. M 162 Rounding Tool.

* In ordering tools for use on Toric attachment specify whether Cylinder or Toric tools are wanted; if Toric, state also whether base curve should be 3, 6 or 9 D. For special Toric tools for roughing, see page 314.

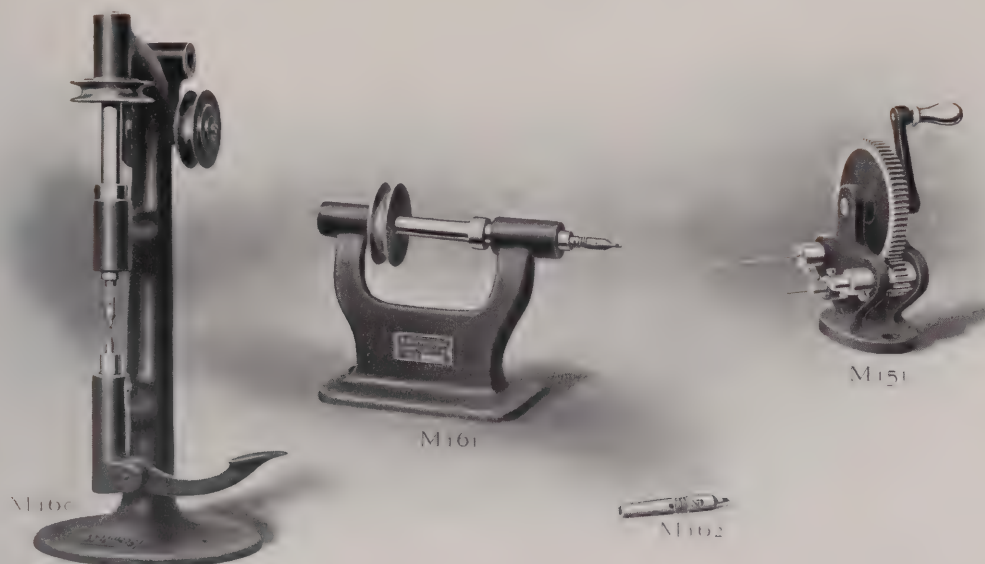
† We supply all grinding tools and gauges in dioptric curves, for either index 1.507 or 1.5232.

We re-turn grinding tools that are worn out of true.

New diamonds set in stems of any make lens drill or cutter.

Diamond drills re-sharpened and re-set.

In ordering cutting diamonds always state whether diamond is to be set for cutting Cx. and Pcx.; Coq., Toric, and Meniscus, or strong Cc. surfaces.



MISCELLANEOUS EQUIPMENT

CATALOGUE NUMBER

DESCRIPTION

- M 151 Hand Tapping and Broaching Machine, with three spindles.

The holders take our standard taps or broaches and are geared to high speed. Machine may be fastened to bench, thus making a very handy and exceedingly useful bench accessory.

- M 152 Hand Tapping and Broaching Machine, with two spindles.

This machine is of the same type as our No. M 151, except that it has two spindles instead of three.

- M 160 Upright Glass-screw Finishing Machine.

Extra for attaching to bench, including M 11 countershaft, belts and pulleys.

This machine is supplied with our No. M 162 Screw Finishing or Rounding Tool and is used for finishing glass screws after they have been inserted in straps and cut off. The use of this or our M 161 machine provides the only satisfactory method of finishing rimless work.

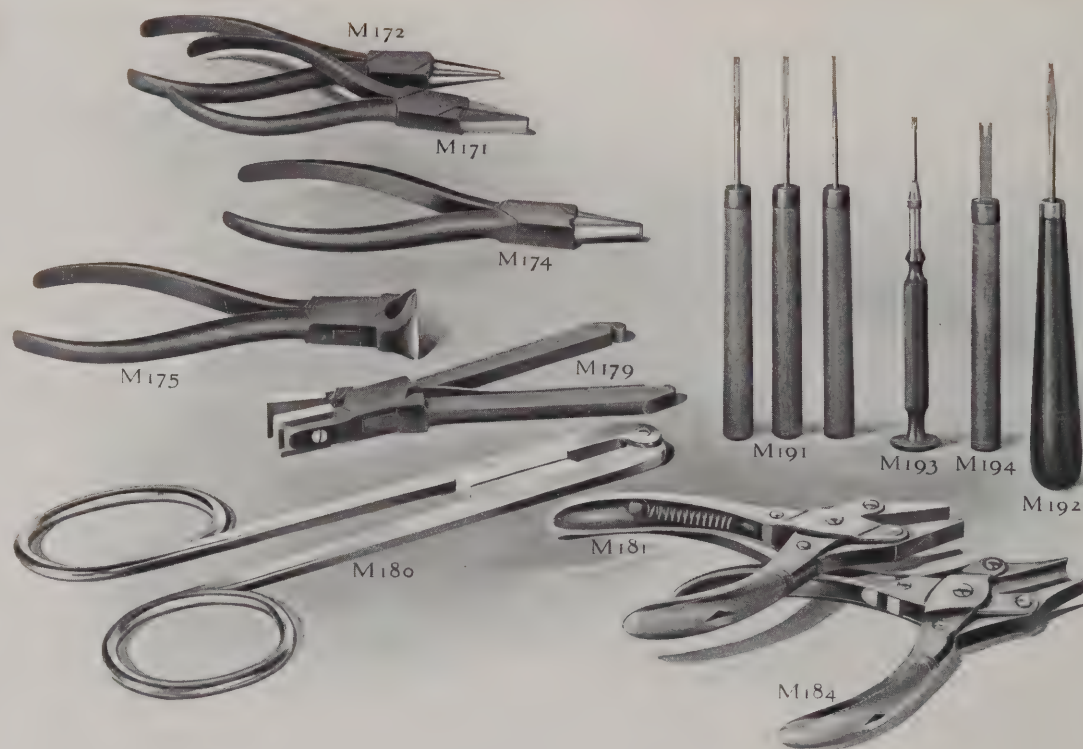
- M 161 Horizontal Glass-screw Finishing Machine.

Extra for attaching to bench, including M 11 countershaft, belts and pulley.

The same work may be performed with this as with our No. M 160 machine, and we recommend it particularly because it requires but one hand to operate. Spindle is horizontal instead of upright. One end of spindle is equipped with our No. M 162 Screw Finishing or Rounding Tool furnished with the machine. The other end may be used for solder burr or reamer. Care must be exercised to see that No. M 160 and M 161 machines are belted to run the tool in the direction that will not loosen the screw.

- M 162 Screw Finishing or Rounding Tool, for glass screws.

This is the tool we furnish with our No. M 160 and M 161 machines listed above. It is a very delicate tool and blades must be honed occasionally to keep in perfect condition. Taper shank of tool will fit spindle chucks of our lens drills and polishing head. New blades may be supplied for this tool (see page 332). Full directions for care and operation supplied with each tool.

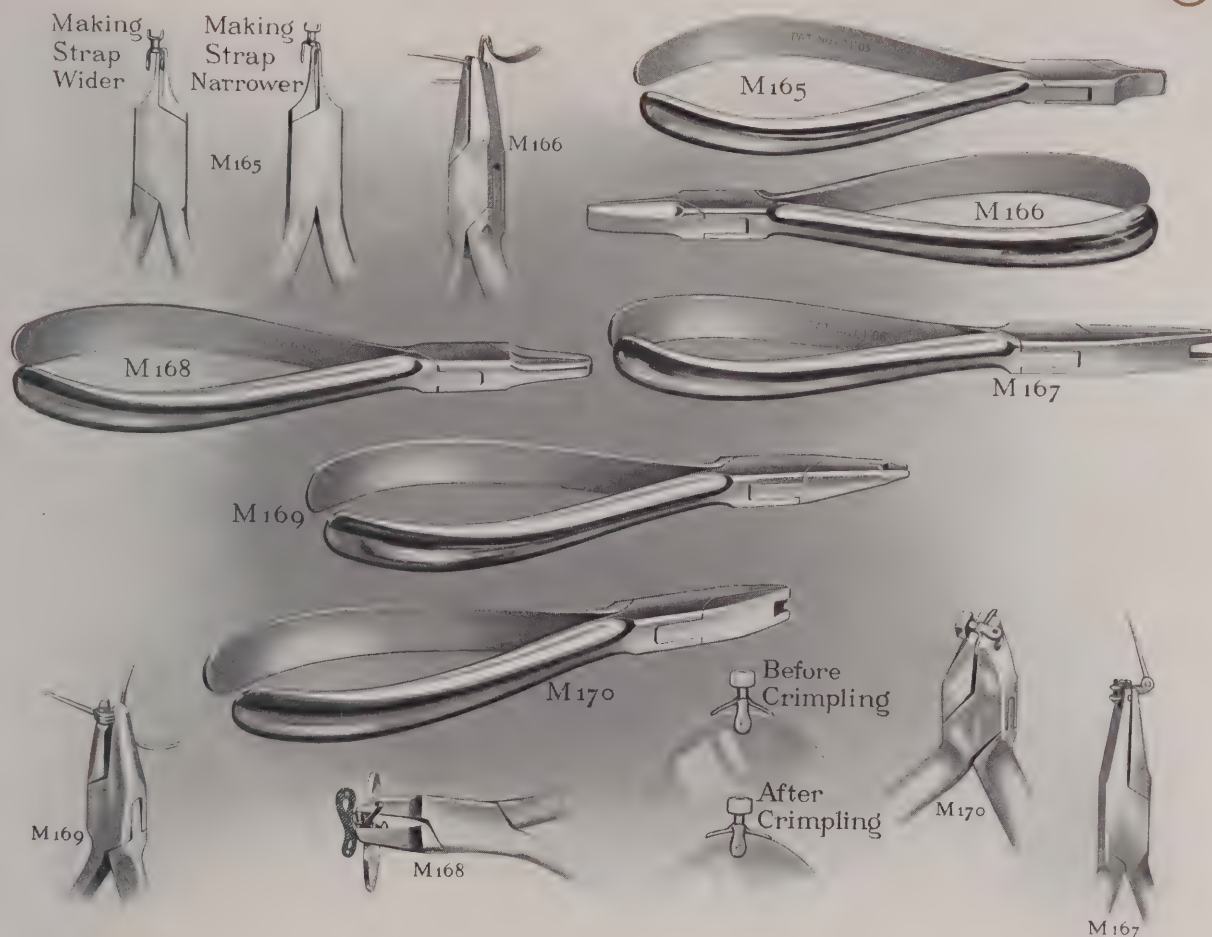


MISCELLANEOUS TOOLS AND SUPPLIES

CATALOGUE NUMBER

DESCRIPTION

- | | |
|---------|--|
| M 171 | AOCo Special Pliers, 5-inch, flat nose, supplied black unless ordered in polished nickel. |
| M 172 | AOCo Special Pliers, 5-inch, round nose, supplied black unless ordered in polished nickel. |
| M 173 | AOCo Special Pliers, 5-inch, pointed nose, supplied black unless ordered in polished nickel. |
| M 174 | AOCo Special Pliers, 5-inch, hollow chop, 3 sizes, supplied black unless ordered in polished nickel. |
| M 175 | AOCo Special Pliers, 5-inch, end cutting, machine finish. |
| M 176 | AOCo Special Pliers, 5-inch, side cutting, machine finish. |
| M 177 | AOCo Special Pliers, 5-inch, for shaping rimless straps, nickel. |
| M 178 | Pliers, for crumbing lenses. |
| M 179 | Pliers, for crumbing lenses, with interchangeable jaws. |
| M 179-a | Interchangeable Iron Jaws, for No. M 179 Pliers. |
| M 180 | Tongs, for crumbing lenses. |
| M 181 | Pliers, parallel jaws, nickel-plated, flat nose. |
| M 182 | Pliers, parallel jaws, nickel-plated, narrow pointed nose. |
| M 183 | Pliers, parallel jaws, nickel-plated, round nose. |
| M 184 | Pliers, parallel jaws, nickel-plated, hollow chop, made in three curves. |
| M 191 | Screw Drivers, factory, set of three sizes. |
| M 192 | Screw Drivers, extra quality, rosewood handle, singly or set of three sizes (in leather case extra). |
| M 193 | Screw Drivers, opticians', rubber revolving top. |
| M 193-a | Bits, for opticians' screw drivers. |
| M 194 | Spanners, factory, for Ajax or Mansfield washers. |
| M 194-a | Spanners, for vise stud nuts, with square recess. |
| M 195 | Spanners, opticians', rubber revolving top, for Ajax or Mansfield washers. |

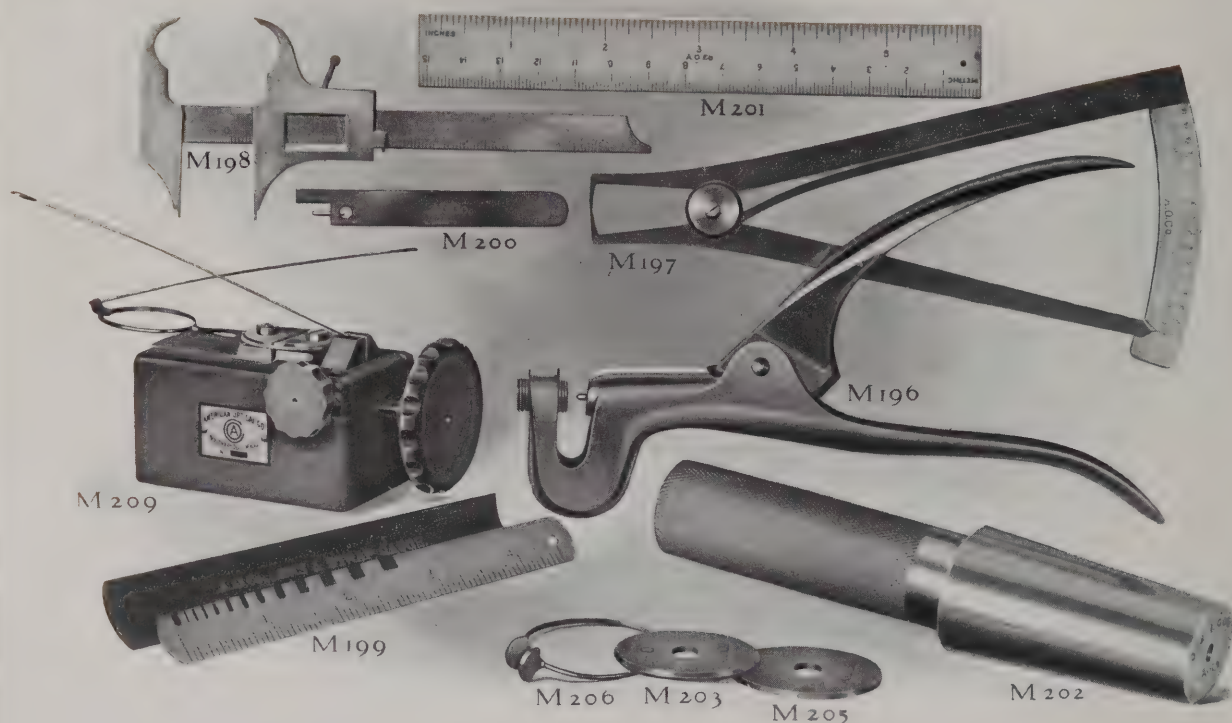


MISCELLANEOUS TOOLS AND SUPPLIES

CATALOGUE NUMBER

DESCRIPTION

- M 165 Strap Pliers, for making frameless straps wider or narrower. May also be used to bend down the lens bearing parts to fit lenses that have been drilled too near the edge.
- M 166 Frame Angling Pliers, made especially for angling frame bridges or bending them "47" style.
- M 167 Frameless Angling Pliers, adapted for angling frameless temples, bridges and studs and for assembling frameless eyeglass mountings.
- M 168 Firs-U Pliers, for truing and adjusting Firs-U or other finger-piece eyeglasses. Also useful for gripping end pieces in truing temples and frames.
- M 169 Temple Adjusting Pliers, for gripping end pieces when setting temples out, making it unnecessary to file the temple joints.
- M 170 Crimping Pliers, particularly adapted for bending down lens bearing parts of frameless straps when hole has been drilled too near edge of lens. This result is accomplished in one operation.



MISCELLANEOUS TOOLS AND SUPPLIES

CATALOGUE NUMBER

DESCRIPTION

- M 196 Spring Punch, small size, plain finish.
Also furnished nickel-plated when so ordered at an extra charge
- M 197 Spring Millimeter Gauge.
- M 198 Vernier Millimeter Gauge.
- M 199 AOC Lens and Strap Gauge, with inch and millimeter scale, in case.
- M 200 Lens Drilling Gauge, for determining correct position of hole.
- M 201 Ivoryette Rule, inch and millimeter, 6 inches long.
- M 202 Hand Formers, tempered steel, nickel-plated, for shaping eyes, from 3 eye to oo eye.
- M 202-a Hand Formers, tempered steel, nickel-plated, for shaping eyes, ooo eye to Jumbo.
- M 203 AOC Standard Hard Eye Plates, for sizing frames, oval or round eyes, all regular sizes and shapes.
- M 204 AOC Standard Hard Eye Plates, for sizing frames, half eyes.
- M 205 AOC Standard Hard Eye Plates, for rimless lenses, oval or round eyes.
- M 206 AOC Standard Eye Sizers, for sizing interchangeable lenses.
- M 207 Mounting Stand, for assembling eyeglasses.
- M 208 Eyeglass Assembling Tool, on bench pin.
- M 209 Eyewire Stretcher.

For slightly stretching the eyewire of a frame to accommodate a lens which may have been ground a little too large. Eyewire is slipped over a split eyeplate the halves of which are drawn apart by turning thumbscrew while end piece is held between jaws as illustrated. A great time saver in Rx shops.



MISCELLANEOUS TOOLS AND SUPPLIES

CATALOGUE NUMBER

DESCRIPTION

- M 251 Electric Heater, for cement bifocal work.
 M 252 Protractors, steel engraved, 5 inches square.
 M 253 Protractors, printed, 3 1/2 inches square.
 M 255 Testing Needles, for matching karat, set of nine on ring.
 M 256 Crystal Balls, 10 cm. diameter, on ball-end wire tripod.
 M 256-a Crystal Balls, 10 cm. diameter, on plain wire tripod.
 M 256-b Crystal Balls, 10 cm. diameter, on velvet covered standard.
 M 256-c Crystal Balls, 10 cm. diameter, on carved Japanese stand.
 M 256-d Crystal Balls, 10 cm. diameter, on fancy carved Japanese stand.
 M 257 Color Bar, smoke shades, 0 to 7.
 M 258 Spiral Eyeglass Magnifiers, in case, 16 D. focus (state focus in ordering).
 M 258 Spiral Eyeglass Magnifiers, in case, 20 D. focus (state focus in ordering).
 M 258 Spiral Eyeglass Magnifiers, without case, 16 D. focus (state focus in ordering).
 M 258 Spiral Eyeglass Magnifiers, without case, 20 D. focus (state focus in ordering).
 M 259 *Folding Eyeglass Magnifiers, in case, 16 D. focus (state focus in ordering).
 M 259 *Folding Eyeglass Magnifiers, in case, 20 D. focus (state focus in ordering).
 M 259 *Folding Eyeglass Magnifiers, without case, 16 D. focus (state focus in ordering).
 M 259 *Folding Eyeglass Magnifiers, without case, 20 D. focus (state focus in ordering).
 M 260 Glass, white or colors for display purposes, in chunks.
 M 261 Focus Tags, cut to size, put up in envelopes in gross lots.
 M 262 Rubber Tubing, for Riding Temples, sold by the foot.
 M 264 Geneva Lens Measure.
 M 265 Amoptiscope Display Stand, oak wax mission finish.

* Patented.

In ordering magnifiers specify whether with or without case and state focus desired.
 For illustrations of M 252 and M 253, see page 260.



MISCELLANEOUS SUPPLIES

CATALOGUE NUMBER	DESCRIPTION
M 301	Emery, best grade, for roughing, in 5-pound cans.
M 302	Emery, fine grade, dry, for smoothing, in 5-pound cans.
M 303	*Emery, extra fine grade, dry, for finishing, in 5-pound cans.
M 306	Felt, cut in round pieces, 10 cm. diameter.
M 308	Polishing Compound (Rouge), wet mixed, for polishing lenses, best quality, in 5-pound cans.
M 309	Polishing Compound (Rouge), dry powdered, for polishing lenses, best quality, in 5-pound cans.
M 310	Rouge Ball, extra fine quality.
M 311	Soft Pitch, in 5-pound packages.
M 312	Pitch, in 5-pound packages.
M 312 1/2	Pitch, in 6-ounce sticks.
M 313	Tripoli.
M 314	Wax.
M 315	Pumice, powdered.
M 316	Cement, for Cement Bifocal Lenses, in 1-ounce bottles.
M 317	Cement, for Cement Bifocal Lenses, in tubes.
M 318	Cement, for Perfection Bifocal Lenses, in sticks.
M 319	Melange, a preparation for drilling lenses, in 2-ounce bottles.
M 320	Ink, for marking axis or center on lenses, in 1-ounce bottles.
M 321	Polisher Cement, in 3-pound cans.

* A special extra fine emery for high-grade lens finishing, can be furnished.
Prices quoted by wholesalers upon application.



MISCELLANEOUS POLISHING SUPPLIES

CATALOGUE NUMBER

DESCRIPTION

M 135	Polishing Wheel, leather covered on edge, 7 inches diameter, 1 inch thick.
M 136	Brush Wheel, 2 rows, 2½ inches diameter.
M 137	Brush Wheel, 5 rows, 5 inches diameter.
M 138	Buff Wheel, 50 ply, 3 inches diameter.
M 139	Buff Wheel, 50 ply, 4 inches diameter.
M 140	Buff Wheel, 50 ply, 6 inches diameter.
M 141	Cotton Ring Buff, 3 inches long.
M 142	Felt Ring Buff, 3 inches long.
M 143	Buff Sticks.
M 144	Felt Wheel, for polishing edge of lenses, 6 x 1½ inches.
M 145	Felt Wheel, for polishing edge of lenses, 14 x 1¾ inches.

Prices on AOC belting, pulleys, shafting, etc., quoted by wholesalers upon application.



CASE LETTERING MACHINERY

CATALOGUE NUMBER

DESCRIPTION

- | | |
|-------|--|
| M 331 | Case Lettering Press only (without bench), with clamp holder for dies, gas burner and wrench. |
| M 6 | Bench complete, 4 feet long, 2 feet 1 inch wide, with M 331 Case Lettering Press and two type cases. |
- Extra charges are made for additional type cases, No. M 339, attached to bench.
 An extra charge is made if M 6 Bench is required to be specially crated for foreign shipment.

The AOC Co Case Lettering Press was designed by us as the result of many years' experience in gold leaf lettering on eyeglass and spectacle cases. In construction and design it conforms to all requirements for simplicity, ease of operation and uniformly satisfactory results. This press has the general endorsement of all representative wholesalers. It may be readily attached to any work bench, or we will supply a bench with the press installed ready for use.

An adjustable gas burner provides the means for heating type or die.

An electric heating attachment may be supplied with this press at an extra charge when so ordered.

For material and supplies used in Case Lettering, see following page.

No. 11 American Optical Co.

No. 12 American Optical Co.

No. 13 American Optical Co.

No. 14 American Optical Co.

No. 15 American Optical Co.

No. 16 American Optical Co.

No. 17 American Optical Co.

No. 18 American Optical Co.

No. 19 American Optical Co.

No. 20 American Optical Co.

NO. 21 AMERICAN OPTICAL CO.**No. 22 American Optical Co.****No. 23 American Optical Co.**

CASE LETTERING SUPPLIES

CATALOGUE NUMBER

DESCRIPTION

- M 333 Pallets, for three lines of type, size of form $\frac{9}{16}$ x $1\frac{5}{8}$ inches.
- M 334 Pallets, for four lines of type, size of form $\frac{1}{4}$ x $1\frac{5}{8}$ inches.
- M 335 Pallets, large, for six lines of type, size of form $1\frac{1}{16}$ x $1\frac{5}{8}$ inches.
- M 336 Pallets, extra large, size of form $1\frac{1}{8}$ x $2\frac{1}{2}$ inches.
- M 337 Curved Form, small size, for setting type in circle.
- M 338 Curved Form, large size, for setting type in circle.
- M 339 Type Cases.
- M 340 Brass Ornaments, assorted.
- M 341 Brass Reglet, for spacing between lines, one dozen pieces in package.
- M 342 Pad on which gold leaf is cut.
- M 343 Sandstone, for dressing above pad.
- M 344 Gold Leaf Cabinet, glazed.
- M 345 Gold Leaf Cabinet, frame only, without glass.
- M 346 Gold Leaf, best quality, package of 500 leaves $3\frac{3}{8}$ x $3\frac{3}{8}$ inches.
- M 347 Knife, for cutting gold leaf.
- M 348 Sizing, in $2\frac{1}{2}$ -ounce bottle.
- M 349 Sizing Powder, in $\frac{1}{2}$ -ounce bottle.
- M 350 Absorbent Cotton, in packages.
- M 351 Car-Mu-Cha, for removing superfluous gold leaf, in $\frac{1}{4}$ -pound cans.
- M 352 Metal Block, for use in lettering flat eyeglass cases.
- M 353 Metal Block, for use in lettering self-closing cases.
- M 354 Metal Block, for use in lettering Nos. 306, 463 and 473 cases.
- M 355 Wooden Block, for use in lettering straight temple cases.
- M 356 Wooden Block, for use in lettering paper form, riding temple cases.
- M 357 Brass Type, for case lettering (see illustration above). Fonts Nos. 13 and 21 each contain 151 pieces type. Other fonts contain 175 pieces each. Order by catalogue number, stating number of font.

BOXES

Not Printed, Sold in Lots of 1000*

CATALOGUE NUMBER

DESCRIPTION

- M 401 Covered with glazed paper, for one dozen 1 eye lenses, $4\frac{3}{4} \times 1\frac{1}{4} \times 1\frac{1}{4}$ inches.
 M 402 Same as No. M 401, except for 0 or 00 eye lenses, $5\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{4}$ inches.
 M 404 Same as No. M 401, except for 000 eye lenses.
 M 405 For Edged Perfection Bifocal Lowers and Edged Segments.
 M 406 For Uncut Wafers, $2\frac{5}{8} \times 1\frac{3}{8} \times 1\frac{1}{2}$ inches.
 M 407 For Uncut Wafers, $2\frac{5}{8} \times 1\frac{5}{8} \times 1\frac{1}{2}$ inches.
 M 408 For Opifex Wafers.
 M 409 For Small Size Oval Uncut Spherical Lenses, $6 \times 4 \times 1\frac{3}{4}$ inches.
 M 410 For Large Size Oval Uncut Spherical Lenses, $7 \times 4 \times 1\frac{3}{4}$ inches.
 M 411 For Large Oval or Round Uncut Spherical Lenses, $6 \times 4\frac{1}{2} \times 2$ inches.
 M 412 For Uncut Sphero Cylinder Lenses, $6 \times 2\frac{1}{2} \times 2\frac{1}{4}$ inches.
 M 415 Slide Box, for frames, size inside 6 inches long.
 M 416 Slide Box, for frames, size inside 5 inches long.
 The above sizes are approximate only and unless otherwise ordered we supply plain white boxes without labels of any kind.
 M 420 Mailing Box, for eyeglasses.
 M 421 Same as No. M 420, except for riding spectacles.
 M 422 Same as No. M 420, except for straight temple spectacles.
 M 423 Mailing Box, for compound lenses, size $2 \times 2 \times 2$ inches.
 M 424 Same as No. M 423, except larger, size $3 \times 2 \times 2$ inches.
 M 425 Same as No. M 423, except larger, size $4 \times 2 \times 2$ inches.

*For quantities of less than 1000 boxes at a time an extra charge is made.

PAPER AND ENVELOPES

Paper Sold by the Pound, Envelopes by the Thousand

CATALOGUE NUMBER

DESCRIPTION

- M 431 Extra-quality White Tissue, anti-tarnish, size 9×10 inches, for wrapping stock or prescriptions.
 M 432 Oiled Paper, for wrapping steel goods, size $7\frac{1}{2} \times 9$ inches.
 M 435 Anti-tarnish Envelopes, $1\frac{3}{4} \times 3\frac{1}{4}$ inches.
 M 436 Anti-tarnish Envelopes, $2 \times 4\frac{3}{4}$ inches.
 M 437 Anti-tarnish Envelopes, $2 \times 6\frac{1}{2}$ inches.
 M 438 Anti-tarnish Envelopes, $2\frac{1}{2} \times 4\frac{1}{4}$ inches.
 M 439 Anti-tarnish Envelopes, $2\frac{7}{8} \times 5\frac{1}{4}$ inches.
 M 440 Anti-tarnish Envelopes, $3\frac{3}{8} \times 6$ inches.
 M 441 Anti-tarnish Envelopes, $1\frac{7}{8} \times 3\frac{3}{4}$ inches.
 An extra charge per 1000 is made for printing above envelopes.
 M 442 Envelopes, for Sphero Cylinder Lenses, 2×2 inches, white.
 M 443 Envelopes, for Sphero Cylinder Lenses, 2×2 inches, pink.

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